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YOU ARE WELCOME TO ANYTHING WE PUBLISH.

WE are often in receipt of inquiries as to whether matter published in the MANUFACTURERS RECORD can be republished in full by other papers. While we prefer that matter which appears in our columns should not be used without express permission in prospectuses or pamphlets designed for the purpose of selling securities, anything which appears in this paper can at any time be republished in part or in full by any newspaper in the country. The only request we make in this connection is that the usual credit be given.

In this hour of world tragedy, when it becomes of supreme importance that this nation should be fully aroused to the task before us, the MANUFACTURERS RECORD is giving much attention to the discussion of war questions. If the republication of any of these articles can be of service in awakening the nation to this great issue, we shall be more than glad to have them republished with the utmost freedom by other newspapers.

STANDARDIZATION OF FREIGHT CARS IN PROSPECT.

AT the meeting held in Washington last week under the auspices of the National Association of Cotton Manufacturers, Howard Elliott, of the Railroads' War Board announced that the Board has appointed a committee on the standardization of freight cars to 30, 40 and 50 tons capacity, respectively.

If standardization of freight cars is accomplished to the satisfaction of the railroads and the public, a great step forward in transportation affairs will have been taken. Standardization of certain features of freight-car construction—couplings, for instance—is already a fact and has existed for some years, but standardization as to length, width and height of cars with regard to capacity is yet to be realized. For instance, if it can be arranged that a boxcar of, say, 30 tons capacity will be built of such and such dimensions, it will be known by all railroads, and to all active shippers at least, how much that car can carry of any given product. There would be no need for doubt on the part of a shipper as to how many cars he would have to order to load any given shipment, and the same knowledge would apply to equipment of other capacities and types, gondolas, flat cars, hopper cars, etc.

It is much to be hoped that the efforts of the Railroads' War Board in the direction of car standardization will be productive of anticipated results, and also that the efforts to secure the fullest utilization of railroad equipment will soon attain the 100 per cent. degree of success that is the aim of all good railroads.

"Every Mechanical Resource of the Nation Must Be Fully Utilized," Says Edward N. Hurley, Chairman of the United States Shipping Board, and Admiral Capps.

ADMIRAL CAPPS of the Shipping Board, in a recent official report as to the great number of ships under construction and to be constructed, said:

"Every mechanical resource of the United States, with considerable increased developments, will be necessary for the realization of this program and what must follow in continuation of it."

While the MANUFACTURERS RECORD felt that Admiral Capps had fully stated a situation which demands the enlargement of the iron and steel output of the country, it desired to know whether other members of the Shipping Board were as strongly convinced of this need of enlarged output as was Admiral Capps. In reply to a letter to Chairman Hurley of the Shipping Board, whose judgment on business questions has for years commanded the commendation of the business people of the nation, asking for his views on the subject, we have the striking statement published on the cover page of this week. In that statement he commends the work of the MANUFACTURERS RECORD in seeking

"To impress upon the country the supreme importance of enlarging its output of iron and steel and their products, and of all other mechanical work."

The entire statement made by Mr. Hurley should command the nation's attention. He urges that manufacturers should invest money in the enlargement of production, and that in this way manufacturers, capitalists and working men can render the highest service to the country outside of the work that is done in the trenches themselves. These men, he says, by pressing with the utmost vigor the production of the materials needed for the construction of the ships, will be rendering a service next to that done in the trenches; and he takes the view that the industrial world will not be taking any financial risks in developing the plants needed for the production of supplies adequate to the successful conclusion of the war; for having won the war, the nation's industrial future as well as the liberty of the United States will be secured.

We commend this vigorous statement to the earnest attention of every business man in America, for there is great need for enlargement of the output of iron and steel and kindred interests to take care of the actual necessities created by the war and for the adequate prosecution of the war.

There are few men in the nation who have made for themselves a stronger hold in the confidence of the business people of the country than Mr. Hurley, himself a practical manufacturer, and for some years head of the Federal Trade Commission, in which position he rendered services of the greatest value to the country. As chairman of the Shipping Board he is now, with his associates, carrying forward the work upon which the nation's life depends, for vain would be the increase of the production of

foodstuffs, and vain would be the creation of an army in this country, if we could not send the foodstuffs and the army to Europe to fight the world's battle there.

Ships must be built. Every resource of the nation must be thrown into shipbuilding, and it behooves the working men, manufacturers and capitalists of the country to realize that they have the opportunity now to render a service to the country standing next to that of the soldier who offers up his life on the battlefield.

DOUBLED HIS CONTRIBUTIONS TO THE RED CROSS AND PAYS WAR TAXES WITH MORE PLEASURE.

FROM W. W. STEVENS, a fruit grower of Mayfield, Ga., we have received a letter which we commend to the attention of our readers. It is as follows:

Enclose you will find \$10, for which send 100 copies of "America's Relation to the World War." I sent \$1 last week and received 10 copies, and I was so well pleased that I want to distribute 100 copies. When reading it a thrill would run clean through my whole system. When I finished reading it I resolved to double my contributions to the Red Cross funds and pay my war taxes with more pleasure than I ever did in my life. I do not believe that I have read anything since the war opened that waked me up like this did.

Many letters of commendation of the work of the MANUFACTURERS RECORD have been received from people in all sections, but none has more strongly appealed to us than this one from Mr. Stevens, for it means much to this nation and to the world if through the matter the MANUFACTURERS RECORD is publishing and through the pamphlet "America's Relation to the World War" men can be made to double their contributions to the Red Cross and to pay their war taxes with more pleasure than they ever paid any other taxes in their lives.

Taxes are somehow the last thing a man wants to pay unless it is perchance the doctor's bills or newspaper bills. There seems to be some aversion to all three, and the writer once heard one man say: "We pay all bills except doctor's and newspaper's first, and when we have nothing else to do with the money we pay them."

The payment of taxes is sometimes opposed, and is nearly always done somewhat grudgingly, for somehow people do not seem to quite realize their own individual responsibility to maintain the Government, to secure good roads and create educational opportunities without having the privilege of grumbling about the taxation, and now when taxation comes heavily upon all business interests and individuals, when every man must pay some part of the world's burden through increased and ever-increasing war taxes, there are signs here and there of a disposition to fight taxation or to lessen proposed contributions to the Liberty Loan on the ground that increased taxation has lessened the interest in subscribing to the loan.

Such statements are freely made, but here is a man who is willing to pay his war taxation with pleasure for the privilege of thus contributing to this great struggle of our nation to save itself.

Some items in the tax bill passed by Congress

were, we believe, unwise and unjust. There are many things, we think, which might be fairly and squarely criticized from patriotic motives, but we must remember that Congress is composed of the men whom we sent there. The Congress of the nation may have made some bad blunders; nevertheless, the voters are the men to be blamed, and all of us must take our share of the blame.

Congress passed a bill for taxation which will work hardships in many cases, but will any tax bill for this war be one-half, yea, one-tenth so hard as the bill which the soldier must pay in his training camp, on the battlefield and in the trenches? He has had to give up his home, all his loved ones, all his business interests and prospects and consecrate his life to this task. What right has any other man in the nation to demand that the soldiers should go out and fight for him, and perhaps die for him and his family, and yet he grumble because of taxation, even if, in his own particular case, he feels that the taxation is not quite just and fair?

If the people of this country, it matters not how rich or how poor they may be, will come to an adequate realization of the call of God and humanity upon them in the same way that the call has come to the soldiers, there will be no desire to accumulate money during the continuance of this war. Men will feel that they should work as they never worked before, on the farm and in the factory and everywhere, to bring forth the largest results that may be possible, and then dedicate the increased profits which they may make to the work of the nation in this, the most momentous hour of the last 1900 years.

It behooves us as a people to absolutely put away from our thoughts every idea of accumulating money during the continuance of the war, but to do all in our power honestly and fairly to make as much as possible and then to freely invest the last dollar of these surplus earnings in the Liberty Bonds, in Red Cross or other religious activities. We say other religious activities advisedly, for Liberty Bonds and the Red Cross work are in the broadest sense deeply religious work. Even then we would still not do one thousandth part as much as the soldier, who through suffering, and perhaps through death, offers up his life as a sacrifice to save us and the womanhood of the world, and to save all civilization from being overrun by barbarism.

Not since Calvary has earth known anything to be compared with this hour.

THE NATION'S NITRATE PLANT.

ACCORDING to a letter from our Washington correspondent, Muscle Shoals has won out as the location for the proposed Government nitrate plant. Wherever this plant is established, it must, of necessity, have a very great influence upon all the surrounding territory, but more than that, the establishment of this plant is of vital interest to the entire nation, looked at from every point of view. That it should be established somewhere far away from the coast goes without saying, and yet, a few years ago, when the MANUFACTURERS RECORD commenced the agitation in favor of building munition and kindred plants in the interior in order to avoid possible danger from invasion through the coast, many of our readers thought that we were unduly alarmed and that there was no possible condition which could ever come about by which the coast of this country could be invaded. The position of the MANUFACTURERS RECORD, however, was later strongly upheld by the decision of Government commissions that munition plants should be established in the interior.

While there are many splendid sites in the central South and elsewhere for the nitrate plant, the MANUFACTURERS RECORD believes that there was no better point in the United States than the one which the Government has now selected.

IT may be that the reason why German diplomats are adepts in the clumsy art of "spilling the beans" is because they are "so" temperamental.

THE GOVERNMENT EXPLAINS THE DECREASE IN THE LUMBER TRADE AND REASONS FOR IT.

THE United States Government, through the Forestry Service of the Department of Agriculture, officially endorses the value of advertising extensively. In a report by this department in regard to the substitution of other building materials for wood, the department, among other things, says:

"Manufacturers of other building materials have spent large sums of money to obtain reliable information about their products. They have had to advertise extensively to make a place for themselves. Substitutions for lumber are guaranteed to meet specifications which are easily understood by the consumer. These facts have combined to make the substitutions increasingly popular."

Primarily the decrease in the consumption of lumber by reason of the substitution of other building materials is to a considerable extent due to the failure of the lumber people, when competition came, to recognize the changed conditions and to meet them by broad advertising. With all of the advantages which concrete construction has, the cement industry would not have developed to its present magnitude if cement manufacturers had not individually and collectively carried on a campaign of such vigorous advertising methods as have prevailed for many years. It was an outcome of this advertising campaign which made the public think of cement and of concrete whenever they thought of anything in connection with building operations. On the other hand, lumber people, believing in the methods which had prevailed before the days of cement competition, failed to realize the change that was taking place, and if they advertised at all, they advertised in a small way or else purely in lumber publications, read only by lumber people. They made no attempt to reach other classes of buyers, though here and there of late there has been some little movement on the part of some lumber interests to reach the public generally. As yet, however, the work is meager, and does not begin to measure up to the opportunity.

We would not suggest that lumber concerns should not advertise in lumber papers. We believe they should do so, just as cement concerns advertise in cement papers, but to limit this advertising to papers representing an industry shows a very narrow conception of the opportunities and possibilities in advertising. The lumber people should have made the public understand what they claim for lumber as a building material. By a broad campaign of publicity they should have educated the home builder as well as the architect as to the desirability of lumber as viewed by the lumber producer, but this they largely failed to do, for advertising in lumber papers merely kept their business before other lumber men.

There are other industries which have permitted their interests to be minimized and lessened by changes which they did not meet with comprehensive plans for publicity work. The Government has done wisely in calling attention to the failure of the lumber people as one great industry to advertise extensively as was done by those making materials to substitute for lumber.

These substitutions have not been used because of cheapness, for this report says that more than 75 per cent. of the replacement of wood is made in spite of the higher initial cost of the substitute. The extent to which this substitution has been carried on, according to this report, shows a replacement of lumber by other materials amounting to 8,000,000,000 board feet, or 21 per cent. of the lumber consumption of the United States in 1915, and the rate of substitution is said to be increasing in excess of 500,000,000 board feet a year.

The lumber people are largely responsible for their failure to keep the public thoroughly informed as to the claims made for lumber in building operations, while the cement people have to their credit the creation of an enormous industry by intelligent publicity work. But there are some cement concerns which are willing to reap without sowing and to share the prosperity created by the advertising expenditures of others. It is not possible, it seems, to make all men do their share, for some are shirkers, and are willing to let others bear the burden. The same conditions have prevailed in the lumber trade as in the cement industry.

NEW YORK'S HEALTH COMMISSIONER DEMANDS REMOVAL OF RESTRICTIONS UPON OLEOMARGARINE.

HAVEN EMERSON, Commissioner of Health of New York, in a letter to the New York Times, makes a very strong criticism of the legislation at Washington and Albany which limits the use of oleomargarine, in which he says:

"Oleomargarine is made exclusively in Federal inspected slaughter-houses and is subjected to a pasteurizing process during manufacture.

"Butter is made from cream from untested cattle, probably 20 to 30 per cent. tuberculous, and made in a multitude of farm and dairy premises, and butter factories, unsupervised and known to be, in many instances, insanitary.

"Oleomargarine is used by the Association for Improving the Condition of the Poor, the City Mission, Brooklyn; Fort Totten Post Hospital, regiment of regulars, Sea Girt and Fort Hamilton; the Department of Health Lunchroom, and by public institutions in the following States: Massachusetts, Rhode Island, Indiana, Illinois, West Virginia, Kentucky, Kansas.

"Weight for weight and quality for quality, oleomargarine is of equal value with butter, and is as wholesome, nutritious and palatable. Its use is extending steadily on its merits. New York city must still charge its taxpayers with the unnecessary cost of butter so that the dairy owners may profit, and yet the private citizen may reap the benefit of using oleomargarine in his home, and that he does so avail himself of his privilege can be seen from the following facts: 1,500,000 pounds a year are sold in New York city and State. In 1916, 150,523,722 pounds were made in the United States and Federal tax paid thereon; all but 5,000,000 pounds was consumed in the U. S. A.; the rest was exported. One company alone sold 567,790 pounds in New York city in the year ended June 30, 1917.

"As butter is never an exclusive article of diet and as milk or vegetables and fruit in the general diet of children and adults contain the substances other than fats which butter has and oleomargarine has not, there is no disadvantage from the point of view of caloric value or of other food ingredients in replacing butter by oleomargarine in table use and cooking for children and adults.

"If our city legislators at Albany and Washington wished to do a real service in reducing the cost of food in one instance, they would repeal all the embarrassing restrictions now put upon oleomargarine, while retaining the valuable protection which guarantees the sanitary safety of its manufacture."

The MANUFACTURERS RECORD is glad to have this confirmation from New York's health commissioner as to the value of oleomargarine, its wholesomeness and the conditions under which it is produced, and this appeal to the National Government to do away with the restrictions which now so seriously affect the manufacture and the handling of oleomargarine. As we have recently shown, the Government tax on the manufacture and sale of oleomargarine is several times as high as the tax on the manufacture and sale of whiskey. Thus the National Government puts a premium on the production and sale of whiskey as compared with the making and the sale of a healthy foodstuff such as oleomargarine, produced largely from cottonseed oil.

BUY US, WE ARE IN THE MARKET!

WHAT boots it if women are ravaged and babies murdered! What boots it if millions and tens of millions die—to the suffragists who at a reception in Baltimore disgraced womanhood by refusing to favor the Liberty Loan because they could not vote!

It was a New York woman who took the lead, but some Baltimore women joined in and commended the disgraceful proposition.

Buy us; buy our patriotism; buy our souls; you can have them all if you will pay us in our coin, the right to vote! But, thank God, there are not many suffragists of that kind.

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Petroleum Consumption in Excess of Production—The South Contributing Over Half of This Country's Output and Equal to 98 Per Cent. of the World's Output Outside of the United States.

A TABLE showing the quantity of petroleum marketed, the stocks of crude oil on hand at the end of each month, and the consumption of petroleum in the United States for last year and for the first seven months of 1917 has been compiled by the United States Geological Survey. These statistics are based on monthly statements sent to the department by the oil-producing interests.

CRUDE PETROLEUM MARKETING, CONSUMED AND HELD IN STOCK IN THE UNITED STATES JANUARY, 1916, TO JULY, 1917, INCLUSIVE, IN BARRELS OF 42 GALLONS EACH.

Month.	Quantity marketed.	Consumption.	Stocks.
January	23,181,022	21,115,549	187,985,265
February	22,733,550	21,126,277	189,572,538
March	25,523,696	25,755,303	189,340,901
April	24,024,447	24,804,985	188,569,363
May	26,015,713	25,418,752	189,157,324
June	25,539,611	26,563,582	188,133,353
July	25,379,709	24,229,287	189,283,766
August	25,206,566	28,328,130	186,162,302
September	25,261,174	28,750,657	182,673,339
October	26,747,529	28,215,247	181,065,621
November	25,301,138	28,438,809	177,867,950
December	25,853,042	29,692,641	174,028,351
Total 12 months.....	300,767,158	312,438,599	174,028,351

Month.	Quantity marketed.	Consumption.	Stocks.
January	27,431,000	28,795,000	172,664,000
February	24,399,000	24,960,000	172,104,000
March	28,448,000	29,322,000	171,230,000
April	27,615,000	27,933,000	170,912,000
May	28,292,000	29,791,000	169,323,000
June	27,917,000	29,182,000	168,057,000
July	29,344,000	30,794,000	166,607,000
Total 7 months.....	193,356,000	200,770,000	166,607,000
Total for the same months 1916.....	172,397,709	169,013,835	189,283,766

From January 1, 1916, to July 21, 1917, this country consumed 19,085,000 barrels of petroleum more than was marketed in that period, reducing the reserve stocks to that extent, and unless new fields are discovered the reserve stocks will be still further depleted, for the following statements show that though this country has increased its crude oil production, consumption is on a greater ratio of increase.

The quantity of petroleum marketed in this country for the first seven months of 1916 was 172,397,709 barrels, compared with 193,356,000 barrels for the corresponding period of 1917, a gain in quantity produced of 20,958,291 barrels, or 12 per cent.

The quantity of petroleum consumed in the first seven months of 1916 was 169,013,835 barrels, and for the first seven months of 1917 it amounted to 200,770,000 barrels. This was an increase of 31,751,165 barrels, or 19 per cent., in the quantity consumed from January to July, inclusive, over the first seven months of last year, while the increase in the quantity of crude oil marketed during this time was only 20,958,291 barrels.

Stocks of crude oil held by pipe line companies, marketing agencies and refiners who receive all or part of their oil direct from wells increased 3,383,974 barrels during the first seven months of 1916, but decreased 7,421,000 barrels in the corresponding period of 1917. The average daily draft on stocks in July, 1917, the last figures available, was 47,000 barrels, and the average for the first seven months of this year was 35,000 barrels.

WORLD'S PRODUCTION OF CRUDE PETROLEUM IN 1916 AND SINCE 1857, BY COUNTRIES.

Country.	Production in 1916. Barrels of 42 gallons.	Percent- age of total.	Total production from 1857 to 1916, inclusive. Barrels of 42 gallons.	Percent- age of total.
United States.....	300,767,158	65.29	3,917,328,402	60.46
Russia.....	72,801,110	15.81	1,763,585,017	27.22
Mexico.....	39,817,402	8.64	165,087,779	2.52
Dutch East Indies.....	113,174,399	2.86	162,174,312	2.50
Romania.....	110,298,208	2.24	140,310,595	2.16
India.....	58,228,571	1.79	89,820,956	1.39
Galicia.....	6,461,706	1.40	142,494,296	2.20
Japan and Formosa.....	2,997,178	.65	33,166,900	.51
Peru.....	2,560,645	.55	19,344,863	.30
Trinidad.....	11,000,000	.22	3,819,430	.06
Germany.....	798,764	.22	14,867,097	.23
Argentina.....	870,000	.20	1,903,121	.03
Egypt.....	411,000	.09	1,759,996	.03
Canada.....	198,123	.04	23,907,197	.37
Italy.....	43,143	.01	889,513	.02
Other countries.....	725,000	.21	297,000	.00
Total.....	460,639,407	100.00	6,478,944,229	100.00

*Marketed production. †Estimated in part. ‡Includes British Borneo. §Estimated.

The estimated marketed production of the South's petroleum in 1916 was over 156,500,000 barrels. The quantity of petroleum marketed in the United States last year was 300,767,158 barrels and the world's production was 460,639,407 barrels.

The part the South is playing in petroleum production may be realized from the fact that the five Southern States of Oklahoma, Texas, Louisiana, West Virginia and Kentucky, in the order named, produced and marketed over 52 per cent. of the crude oil output of the United States and over one-third of the world's output of petroleum. The relation of the South not only to the wide ramifications of the oil trade in this country are thus clearly shown, but the striking fact is here presented that more than one-third of the world's output of oil is in the South.

The production of oil in the whole world outside of the United States in 1916 was 159,872,000 barrels, while the output in the South alone was 156,500,000, or equal to about 98 per cent. of the world's output outside of the United States.

THE AMERICAN ELECTROCHEMICAL SOCIETY INTENDS TO PERSONALLY INVESTIGATE THE SOUTH.

AMONG the great organizations of the country, measured by the standing of the men connected with it and their achievements in science, is the American Electrochemical Society, whose members have been responsible for the creation of the wide ramifications of the electrochemical industries in this country.

The members of this Society, who are also largely members of the American Chemical Society, were so much impressed with the exhibit of Southern resources at the New York Chemical Exposition that the directors of the Society at the Pittsburgh meeting last week voted to hold the next meeting in the spring of 1918 in the South, with the thought that it would be held at some point in Kentucky, Tennessee or Alabama, if adequate arrangements could be made, not merely for ample hotel accommodations but for the opportunity of studying the chemical and electrochemical industries already developed and the potentialities for further progress in these industries.

Here is a great opportunity for some one of the larger cities in the central South to secure one of the most important conventions which could be held, and arrange a Pullman service to give the members of this Society the opportunity of studying the water-power possibilities and opportunities, and all the vast resources for electrochemical industries in the central South.

Up to the present time comparatively little has been done in the development of electrochemical industries in the South, but the field is limitless. Some of the men identified with this industry, which has created the marvelous activities around Niagara Falls, feel that as a center of electrochemical industries Niagara Falls is doomed. Already there is a movement of these electrochemical industries to other points, and one concern has already arranged to transfer its operations to Sweden and Norway.

The South's great water-powers, developed and undeveloped, and the vast resources of this section in the raw materials needed in electrochemical industries should result in the practical transference of the center of electrochemical activities of the world to this section. And these industries are the foundation for metallurgical and other developments which would prove of infinite value to this section and to the nation.

In his paper read at the Chemical Exposition and published in the MANUFACTURERS RECORD last week, Dr. L. H. Baekeland, one of the world's authorities on such subjects, referred to the fact that our electrochemical industries developed around Niagara

Falls had been the means of giving us a world supremacy in these industries, and he pointed out that this supremacy is vitally threatened by lack of additional water-power to carry on such industries, and that the cheaper powers of Sweden and Norway are likely to take away this supremacy from us.

If the Government should, through legislation, make feasible the adequate development of water-powers in this country, this danger would be eliminated. The great water-power resources of the Appalachian South combined with the wide range of raw materials, if adequately developed in the near future, should make the Appalachian section of the South the place for the establishment and expansion of the nation's electrochemical and electrometallurgical industries.

In themselves chemical industries do not represent as great an amount of money or employ as large numbers of hands as some other big industries, but the essential point is that they have come to be what is now commonly known as "key" industries. In other words, the products of these industries are vitally necessary to so many other industrial undertakings that they bring about the establishment of a wide variety of interests.

At the Chemical Exposition, Dr. Charles H. Herty and Dr. Arthur D. Little brought out the point that the development of chemical industries in this country, and especially in the South, would bring into productivity many resources now latent, adding materially to our national wealth, and that the creation of this new wealth would go far toward offsetting the tremendous cost of the war.

In the light of this situation it becomes especially important that the American Electrochemical Society should carry out its program for holding its proposed meeting in the South next spring, and that this section should be fully aroused to the importance of utilizing this opportunity to bring into this section the foremost electrochemical experts in America—and that means in the world.

AN ORGANIZATION OF SHOTGUN OWNERS.

JOHN PHILIP SOUSA, the bandmaster, and likewise a crack trapshooter, and others are forming an organization of shotgun owners to be known as the National Association of Shotgun Owners, and it is said that thousands have already joined.

The object of the association is to cultivate familiarity with arms in sport, and for the protection of the home by a civilian organization formed for first aid to the public authorities in case of sudden riot or sudden invasion.

The names of those enrolled through the national secretary, R. B. Hearst, 17 East 11th street, New York, are to be forwarded to the Governors of the State in which they reside and to the sheriff of the county. In this way a complete list of the members will be kept on file in the sheriff's office in order that these men may be called for duty at a moment's notice.

These men are not to be under military control. They only pledge themselves to use their ability as expert marksmen to defend their country at home during a crisis of any kind.

SOUTHERN COMMERCIAL CONGRESS.

WE are glad to note that some of the leading chemists and others whose predictions in regard to the South published in the MANUFACTURERS RECORD during the last few years have stirred the nation up to the chemical and other potentialities of the South are among the list of speakers at the Southern Commercial Congress next week, for every additional reiteration that they can give to what they have already said may help to arouse an even broader interest than has already been created.

The program of speeches for the congress, however, includes so many men that it will be practically impossible for anyone to hear even one-tenth of the addresses to be made. New York papers are not much given to the handling of details of great conventions held in that city, but some of these addresses should be of sufficient interest even to command the attention of New York papers.

THE RAILROADS OF THE COUNTRY ARE BEING SUBMARINED TO DEATH.

IN the elaborate report issued by the Federal Trade Commission on anthracite and bituminous coal as the basis for price-fixing on coal great stress was laid upon the inadequacy of the transportation facilities to take care of the traffic. Over and over again attention is called to the lack of transportation, and emphasis is laid upon the acute shortage of supply in the bituminous coal and coke trade, together with faulty distribution and speculation.

At the time the report was made, about the middle of June, it was said: "The present production of bituminous coal the country over is about 40 per cent. short of the possible maximum, and this limitation is solely to be charged as to primary cause to faulty rail transportation. The present demand for coal is unprecedented, but the mines now open are capable of filling this demand if the adequate car supply is furnished. * * *

"We have found that with the market at unheard-of prices, labor is often standing idle at the mines and production is limited as compared with the possible productive capacity."

The Commission expressed the belief that there are enough coal cars in the country, but that they are not properly delivered to the mines, and that an inadequate supply has brought about the chaotic conditions existing in the coal industry.

That these chaotic conditions exist, that coal and coke were exorbitantly high and that the output of coal and its distribution are limited by reason of inadequate transportation is universally known. It is also known that coal is now scarcer than ever because the price fixed automatically reduced production.

These inadequate transportation facilities are largely due to the National Government operating through the Interstate Commerce Commission, to the surrender by the Government last year to the pistol of the highwaymen who held up the President while Congress and the nation and all meekly and ingloriously let the highwaymen have their way, and to the continued agitation for the last 10 years or more against railroads in Congress and in State Legislatures. Without ceasing the MANUFACTURERS RECORD has warned the country for 10 years or more that the conditions now prevailing of inadequate transportation facilities were absolutely inevitable unless restrictive, hampering legislation ceased and unless railroads were given the right to increase their freight rates in order to earn sufficient money to justify the expenditure of the billions of dollars needed for their proper maintenance.

In 1906 the MANUFACTURERS RECORD predicted the present conditions, and stated that within 10 years from that date the traffic of the country would have doubled and that unless \$5,000,000,000 in addition to the amount needed for annual wear and tear was expended in the enlargement of railroad facilities a complete breakdown of the railroad system of the country was inevitable. This prediction as to traffic was fulfilled on time, and the prediction as to the breakdown of the railway system has been fulfilled. The American people themselves are responsible for this condition.

Today as a nation we are paying the penalty for our refusal to see the truth, the penalty of following the blind leaders of the blind, the demagogues who in and out of Congress denounced the railroads, and the failure of the Interstate Commerce Commission to intelligently understand the conditions and permit the railroads to earn sufficient money to call forth from investors the capital needed for expansion. We believe that the Interstate Commerce Commission has cost the country in hampering railroad building far more than the country has gained by its operation. Appreciating fully the folly of the cut-throat policy of railroads in the past in their rate wars, the tergiversation of railroad officials in their system of rebates formerly existing, the sin of the speculators and gamblers who built railroads purely for the purpose of selling them out, we nevertheless believe that the Interstate Commerce Commission has been responsible for greater losses than for gains. A wisely-managed Commission of men who could see

ahead and who disregarded mob clamor would have been a blessing.

We are now up against a shortage of track, of terminals, of locomotives and of cars. Adequate distribution of the products of the country is impossible. Business has been sadly restricted. Preparedness for war cannot be pushed as rapidly as should be done without shoving aside the usual business of the country upon which its prosperity must depend. We need a great increase in transportation facilities through increased mileage and through a great addition to rolling stock, especially locomotives. But none of these things can be brought about without a radical change in the spirit of the people in dealing with railroads, in the spirit of legislation and primarily in the spirit with which the Interstate Commerce Commission views this condition. If the Interstate Commerce Commission would recognize that the ability to handle traffic is of far more importance to the country than the difference in freight rates; if it would recognize that it is hopeless to expect to expand railroad facilities while railroads are hampered and held down in their earnings, it might completely change the whole condition.

Today the railroads of the country are wearing out, and we have before us in the not distant future, unless some great changes are made, a condition somewhat similar to the wearing out of the ocean-going vessels of the world. The English ships coming to Baltimore and to other American ports have been so badly overworked and overstrained, because they could not be stopped long enough for repairs, that many of them are really not fit to cross the ocean. Their efficiency is lessened and the necessity of still heavier repairs is constantly in evidence. We are handling American railroads in the same way. We are wearing them out. We are wearing out the rolling stock. Every time a car is overloaded it is overstrained. Every time a train is overloaded the locomotive and the track are overstrained. Shippers are being urged to overload cars. Temporarily this must be done, but it means a rapid deterioration of the cars, the locomotives and the roadbed. We shall have to pay the penalty later on.

Is it too much to hope that ere it be entirely too late the Interstate Commerce Commission will realize the seriousness of the situation and put the roads in shape to be free from the costly, useless methods which must now be adopted in many things and give them a chance to make earnings which would justify great expenditures on roadbed and rolling stock?

"THE WORD OF HONOR" OF GERMAN OFFICERS.

DISPATCHES from Spain report that a German submarine, which had been interned in Cadiz, had succeeded in escaping and that this had created a great sensation. A cable to the New York World says:

The crew of the U-boat were allowed full liberty in Cadiz, and the officers had given their word of honor not to attempt to escape.

What does the "word of honor" mean to a German officer? Who for one moment can ever accept the "word of honor" of a German private, a German officer, a German kaiser, or any other German? These people have lost all sense of honor. They do not know what honor means, and to accept the "word of honor" of a German officer to any nation, pledging himself to observe this "word of honor," would be the height of folly.

Probably no statement of what the "word of honor" means to a German officer and no more just criticism of some American naval officers, who disgraced themselves and the nation because of their attentions to some German officers, who were, indeed, German pirates, has been given than that appearing in an editorial in Financial America of October 5. We commend it to our readers as an excellent exposition of what the honor of a German officer means, and of the sin of commission on the part of some of our naval officers in showing attention to this particular pirate, and of the sin of our country for which we shall have to pay in billions of money and tens of thousands of lives for our failure at

the beginning of the war to hold Germany to strict account. We knew German crimes, we knew what Germany was doing through its spy system in this country, but we failed to act. Let us not blame the Administration more than ourselves, for we as a nation refused to heed the danger and we individually refused to demand of the Administration that we should hold Germany to account. Let every man in the nation who did not do his duty at that time recognize that upon him rests the responsibility. All that he can now do, to the utmost limit of his ability, will scarcely atone for his failure then, so let him work now with the tremendous energy the Administration is showing to make up for lost time.

Here is the story from Financial America, to which we invite the attention of our readers:

Capt. Max Thierechsen, commander of the German raider Prinz Eitel Friedrich, has been acquitted on the charge of smuggling and convicted under the Mann act of importing a young woman into Pennsylvania for immoral purposes.

The Captain certainly has distinguished himself within the last three years. Sent forth in the Eitel Friedrich to prey on the commerce of Great Britain and France, he promptly sank the American ship Wm. P. Frey, bound with a wheat cargo from a Pacific port to Cork for orders.

Captain Thierechsen started to dump the American wheat of an American ship into the sea and seeing smoke on the horizon before he finished his job and supposing it might be an enemy, he promptly sank the Frey, dragged the American captain, the captain's wife and the crew of the ship over the seas for many weeks, meanwhile sinking British ships as he met them and, at last, needing coal and repairs, he put into Newport News. Instead of being cast into prison or hanged as a pirate, officers of our army and navy flocked to Newport News and wine and dined him and treated him as a hero. When he had been revictualled and refitted, the Government did all it could to aid his escape so he could continue his depredations. French and British cruisers had collected outside to sink the Friedrich. Secretary Daniels sent American warships to compel them to keep outside the three-mile limit and to give opportunity to the raider to get away some dark night.

Thierechsen didn't chance it. He preferred to intern, and he did so. He and his officers were put upon their honor to obey American orders. They pledged, too, that they would have the crew obey the regulations. The manner in which these men kept their oaths as gentlemen is illuminating. Various of the officers decamped. Various of them attempted to decamp. Various of them assisted members of the crew to abscond.

Captain Thierechsen was the worst offender. His conviction as a trafficker in women for immoral purposes gives indication of his moral character. His active or passive part in the escape of the officers of his ship needs no comment. The court says he was not a party to the smuggling and the sale of the chronometers and various other instruments of the ship ashore, so that he has not been proven a common thief.

Of everything else that is vile and contemptible, however, he stands convicted. If he is representative of the German navy, we can understand the U-boat business and "spurlös versenkt."

How proud the American army and navy officers who flocked to Newport News to fawn upon and flatter the captain of the Prinz Friedrich must be to know that the German officer to whom they paid such earnest devotion is a moral degenerate, a dishonorable and dishonored creature, whose words or pledge or solemn oath isn't worth a phennig; who is unfit to associate with clean, respectable people!

Captain Thierechsen will get a chapter in the history of this war, not for his moral and other delinquencies, but because he happened to commit the first great crime against us, sinking an American ship, destroying an American cargo, in violation of law and without warrant or justification. He will receive attention because it will be appreciated that if he had been held as a pirate and his crew treated as a pirate crew; if he had been hanged, as he deserved to be, or put in jail and his whole party with him, the Kaiser and his court never would have obtained the notion that this country wouldn't fight, wouldn't uphold its honor, wouldn't resent anything. If Thierechsen had been dealt with sternly, the Kaiser never would have sanctioned the sinking of the Lusitania, never would have destroyed passenger ships when and where he pleased, never would have entered upon the campaign of ruthlessness, because he would have known the temper of America.

Our smiling approval instead of our fierce wrath at the Wm. P. Frey sinking has cost us terribly.

But that is past.

Trouble, however, is not past, but simply beginning for that distinguished representative of Kultur, Capt. Max Thierechsen.

If any of the officers of the United States army and navy who were puffed up with pride over having the Captain as their friend two and a half years ago wish to dine with him now, they may do so in jail, for the noble Captain goes to prison as a moral pervert.

No Time for Boasting on Crops, for the Gain in Grain Yields Still Leaves Our Production Far Below 1915

DESPITE the optimistic reports as to the great increase in grain crops, excepting corn, this year over last year, the total production of wheat and corn for 1916 and 1917 is 490,800,000 bushels short of the total production of the two preceding years of 1914 and 1915, and this, too, notwithstanding a gain in population of about 2,000,000 people a year and the great increase in demand by reason of the European war.

The total production of wheat and corn in 1914 and 1915 was 7,584,300,000 bushels, as compared with the total for 1916 and 1917 of 7,093,500,000 bushels. Here is a vacuum of nearly 500,000,000 bushels created in the last two years as compared with the two preceding years, which of necessity spells shortage in food and feed, which can only be made up in part by the increase in oats and potatoes.

Even more significant is the fact that a comparison of the average production of wheat and corn since the beginning of the European war, a period in which we have been called on to fill the unprecedented requirements of Europe and to also supply our yearly increasing population, shows an average production of wheat for the three years 1915-1917 of 775,100,000 bushels, compared with 728,200,000 bushels, the average quantity raised from 1910-1914, or a gain of only 46,900,000 bushels, while the average for the corn production for the three-year period of 1915-1917 of 2,929,500,000 bushels, compared with 2,732,400,000 bushels from 1910-1914, gives an increase of about 197,000,000 bushels. In this comparison of averages it must be remembered that without the enormous grain yield of 1915 the average of the last three years compared with the average for the pre-war period would have shown no increase, although our population since 1910 has increased probably by 10,000,000 people and we have had to supply our allies with enormous supplies of grain.

PRINCIPAL GRAIN AND FOOD SUPPLIES.

PRODUCTION.

	Estimate October, 1917 (bu.).	Final, 1916 (bu.).	Final, 1915 (bu.).
Wheat	659,800,000	639,800,000	1,025,800,000
Corn	3,210,700,000	2,583,200,000	2,994,700,000
Total corn and wheat	3,870,500,000	3,223,000,000	4,020,500,000
Oats	1,580,700,000	1,251,900,000	1,549,000,000
Barley	201,600,000	180,500,000	228,800,000
Rye	56,000,000	47,300,000	54,000,000
Buckwheat	17,800,000	11,800,000	15,000,000
Kafrs	98,600,000	50,300,000	114,400,000
Rice	33,200,000	40,700,000	28,500,000
Total grain.....	5,858,400,000	4,805,900,000	6,010,600,000
White potatoes.....	452,900,000	285,400,000	359,700,000
Sweet potatoes.....	87,200,000	70,900,000	75,600,000
Beans	15,800,000	8,800,000	10,300,000
Apples	176,600,000	202,200,000	230,000,000
Peaches	42,600,000	36,900,000	64,000,000
Grand total.....	6,633,500,000	5,410,100,000	6,750,200,000

The estimated quantity of the principal grains—wheat, corn, oats, rye, buckwheat, rice, etc.—produced in 1917 amounts to 5,858,400,000 bushels, which is 1,052,500,000 bushels more than was raised last year; but as there was a decrease of 1,204,700,000 bushels in 1916 over 1915, we are still 152,200,000 bushels short of making up last year's grain shortage.

The total estimated production of grain and principal foodstuffs this year will reach over 6,633,000,000 bushels, but this is less by 116,700,000 bushels than the production of 1915. We have raised a

large food crop this year, but in proportion to the world's demand it will barely tide us over until the next harvest, when we will be compelled, as far as is given to the power of man, to make a great increase over our present production.

Thus, while boasting about the increase over 1916, let us not forget that, despite the urgent call upon the farmers of the nation to do their utmost, our production of these grains and other foodstuffs is actually 116,700,000 bushels short of the yield of 1915, while population has increased by about 4,000,000 and Europe's demands have enormously increased.

SPREAD THE FACTS EVERYWHERE.

If your soul is stirred by the awful realities of Germany's barbarism as published from week to week in the *Manufacturers Record*, pass your copy on to others that those who are not subscribers may learn the fearful realities against which our nation is fighting. Let no single copy be wasted. Pass every copy on to some one else and urge them to send it on to others, that in every home the story as given in every issue of what this war means to every man, woman and child in this and in every other land may be fully understood. Not until then will our nation awake. You can help in this way to win the war.

GERMANY'S WAR A WAR AGAINST CHRISTIANITY.

FOR the last twenty-five years or more there has been a mental invasion of the United States by Germany, an invasion of atheism and agnosticism, an invasion of the false teachings of German philosophers and universities, which, prior to the beginning of the war, had filled our universities and, to some extent, our theological seminaries and our pulpits, with doctrines so rankly unorthodox and atheistic that the religious life of this country was in serious danger. This German invasion had been going on for twenty-five years, and no thoughtful man uninfluenced by it could study its power for evil without being deeply impressed with the fearful results which were being wrought in the religious views of the people of this country.

The *MANUFACTURERS RECORD* has repeatedly called attention to the growing power of this false teaching of the philosophers of Germany as one of the reasons why for a quarter of a century that country, though developing efficiency in material things, was losing all spiritual life. Last week the *MANUFACTURERS RECORD* said:

"All that you have, all that you prize in life, all honor of womanhood, your women, be it remembered, the safety of the prattling baby, the child yet unborn, the religion of Christ, civilization, your

own America, land of Liberty, the home of the free, are now staked upon how you meet your individual responsibility in this, earth's supremest hour."

Before that statement had reached our readers there came to the writer's desk an interesting confirmation by a German writer in a clipping from the *New York Times*, which we republish in full, heading and all, in order to show this confirmation of the position which we have constantly taken, that Germany's success would mean the destruction of civilization and of Christianity itself, since there would be no possibility, for generations to come, for the world teaching of the religion of Christ if Germany, with its atheism, dominated the world.

The statement from the *Times* is as follows:

SAYS PAN-GERMANS HATE CHRISTIANITY

Seek to Force a Home-Made Atheism on the People, German Publicist Charges.

Writing in the *Süddeutsche Konservative Korrespondenz* of Karlsruhe, of which he is publisher and editor-in-chief, Adam Röder, the well-known German publicist, voices the opinion that the ultimate object of the propaganda carried on by the Pan-Germans is the wiping out of Christianity in Germany and the establishing of a peculiar, made-in-Germany religion. After accusing the Pan-German annexationists of bitter hatred of "Semite Christianity" and quoting liberally from their writings to prove his contention, Herr Röder arrives at the following conclusion:

"The Pan-German view of the world is consciously aimed at the rooting out of the Christian religion and the system of ethics derived from it. A German religion is to arise, linked to the belief in Wotan of our ancestors, which, in turn, is to be so 'refined' by the results of the modern theory of races and the teachings of the Darwinian theory of evolution that what remains will be Atheism, framed in high-sounding phrases. The German people, as the noblest and most favored of all races, as the highest manifestation of humanity, will have become its own god."

"Christianity will be done away with according to the ideas of Nietzsche as the great weakening and enervating influence. The only great person is he who has power and uses it. Sin, redemption, repentance, the greatest and most profound things that human thought tries to fathom, do not exist for this company of heartless bullies, whose members, with monocles in their left eyes and rattling sabres in their right hands, challenge the world in order to place the German heel upon its neck in 'ancient Roman fashion.'"

And yet there are some people whose vision is so darkened that they think the pulpit should not be used for a discussion of these subjects. We wonder if they had lived in the days of martyrdom, when men and women were burned at the stake or thrown into the arena to be devoured by wild beasts, if they would have said, "you must not bring these questions into the church. We do not want to hear anything about them. The church is not the place in which to preach on such subjects."

A GERMAN OFFICER SAID, "EITHER GOD IS DEAD OR GERMANY IS DOOMED."

DR. NEWELL DWIGHT HILLIS, in a late address, said:

"That dying German officer in Roye packed the genius of a moral universe into a few words. Wounded last winter through the spinal cord, unable to move the lower part of his body, for weeks he waited for death. Two aged French women cared for the dying man. One day this German officer sent for the village priest and told him that the Von Hindenburg line was nearly complete, that the order to retreat had been given, that the home of these aged women who had cared for him so tenderly would be burned, that not one church, house, barn, vineyard or orchard would be left. The news crushed the old priest."

"In his dying hour a righteous wrath filled the heart of the German officer. These are his last words as I transcribed them from the lips of that priest, standing one day in Noyon:

"Curses upon this army! Curses upon our Kaiser and his war staff! Ten thousand curses upon my country! Either God is dead or Germany is doomed!"

THE SOLDIERS' RIGHT TO DEMAND PROTECTION FROM BEING STABBED IN THE BACK.

MORE and more are the thoughtful people of this nation coming to realize the power of the forces that are working within this country seeking to destroy it. More and more are we realizing the power of the pro-German activities working in every disguise, seeking to embarrass the nation and individuals. In some cases these forces are posing as pacifists, in some as "conscientious objectors," in some cases they are antagonizing the efforts of ministers to present the fearful immorality of Germany's work from the pulpit and seeking to drive out of the pulpit men who try to voice these sentiments.

Three letters which came to the MANUFACTURERS RECORD in the same mail are indicative of conditions which are prevailing, conditions which demand protest and the most vigorous action. It should be possible for the men who are harassed to find a way to reach the people who are doing this work. It should be possible for some department of the Government to be equal to measuring up to the responsibility of crushing out these pro-German activities, for we know that they are working in many directions, even where it is sometimes least understood that their devilish work is actively under way.

One of the three letters mentioned came from a minister who reminds the MANUFACTURERS RECORD that two or three years ago, when he spoke in his own pulpit against the fearful immorality of Germany's war, he was, by pro-German activities, not only driven out of his pulpit, but practically out of the community and forced to go elsewhere, and even within recent days he has been subjected to the same kind of persecution from the church of which he is now pastor, by men who still try to fight against his effort to arouse the people against the work of Germans.

Under existing laws and conditions it seems impossible to reach some people who thus harass those who are trying to proclaim the truth as to German immorality and to German effort to crush the world, but there should be some power which will make it impossible for these pro-Germans (and we feel like again calling them, as we did some weeks ago, pro-Hellites) to use their power to hinder the work of America in this campaign to save itself from destruction.

Another one of these letters was from Mr. N. B. Stewart, a business man of St. Louis, who writes:

"Permit me to say that, although an opponent of Mr. Roosevelt from the day he first entered the political ring, I certainly admire his brand of Americanism and am perfectly willing to forget all his faults, whether they be real or imaginary."

The other letter is from Mr. A. L. Crocker, chairman of the Minnesota Reclamation, Drainage and Flood Commission. Mr. Crocker states the whole situation clearly and strongly, and he, too, commends the suggestion of Mr. Roosevelt as the head of a national safety commission. Mr. Crocker's letter is as follows:

MINNESOTA RECLAMATION-DRAINAGE AND FLOOD COMMISSION.

A. L. Crocker, Chairman.
601 N. W. National Bank Building,
Minneapolis, Minn., September 27, 1917.

Editor Manufacturers Record:

Your plan to create a national safety commission with Ex-President Roosevelt at its head has appealed so powerfully to me that I can't resist the impulse to write and tell you so.

In the terrific situation in which we are living, where all we have ever wanted or valued as a nation is trembling in the balance, there is a supreme call for anything and everything that can help save our national honor and future well-being.

We are tremendously strong in every way, providing we are able to use all our resources, but the insidious and stupefying poison of the non-war forces among us is visibly nullifying the effect of our efforts, and there is no other way that I can conceive of for cleaning up the body politic and of promoting and of pressing to the quickest possible conclusion like your plan put into active operation.

It is not that I am a blind worshipper of Mr. Roosevelt, for I have differed with him radically for several years, but there is no other possible leader for such a thing as you have in mind, and the entire nation would at once feel the electric impulse of his leadership in clearing the air and the blood in this country, and as a consequence, a more concentrated and single-minded prosecution of the war.

We can't dodge the war, and the only considerations are the time and the cost.

A. L. CROCKER.

It is true, as Mr. Crocker says, that we cannot dodge the war. All that we have on earth, all that we hope for, is, as he says, trembling in the balance, and there is a supreme call for everything and anything that can help save our nation. Like Mr. Stewart, Mr. Crocker has not been, as he says, "a worshiper of Mr. Roosevelt," but he believes that he is a man fitted for this particular job. The MANUFACTURERS RECORD, as we have repeatedly said, has vigorously criticized Mr. Roosevelt in the past. It was not an admirer of him when he was in the Presidency, except for some particular things which were done to the nation's advantage, but today Mr. Roosevelt stands out conspicuously as a man of backbone, of perception, of insight into this situation, and his appointment at the head of a department of safety to deal with the forces that work in this country to produce disintegration and destruction would command the universal support of Americans and would immediately arouse the fear of the anti-Americans who are so abundant in this country today.

Forces are at work in the United States to duplicate what is going on in Russia. The same power of German money, of pro-German activities, of socialism, of the work of the I. W. W., and all of the combination of influences fresh from the lower regions, is vigorously being used to try to bring about chaos in this country. Shut our eyes as we may to the reality of this situation, it forces itself upon our attention and we are compelled to see what we would gladly shut out from our vision. Dangers of tremendous import are around us. The forces of disintegration and disorganization, of anarchy and socialism in its rankest sense, of pro-German activities everywhere, are at work to bring about chaos and to make impossible the success of our war with Germany. Mr. Crocker refers to these forces as the insidious and stupefying poison which is nullifying the effect of our efforts.

If there is another man in the country better fitted to head such a department of safety than Mr. Roosevelt, then we would gladly say "Find him, and call him to that position," but do not let us any longer hide from ourselves the realities of the hour; do not let us any longer dilly-dally with a question of supreme moment, where every hour lost means the death of American soldiers.

Many of the facts which the Government has lately been bringing forth were known to Government circles in Washington two years or more ago, and yet in the light of these facts which now startle the public who would not believe them when published by the MANUFACTURERS RECORD and other papers who knew the situation, the Government made no move whatever to meet the coming issue by adequate preparedness. Only that the Government may be stirred to a realization of the need of preparedness to meet this internal situation would we remind the Administration that it delayed action at a time when action two years or more ago might have saved us from this situation and saved the nation from some of the fearful cost it will now have to pay in the lives of soldiers and in the billions of dollars that must be expended.

In the name of humanity and in the name of the soldiers who are going out on the battlefield to die, we appeal to the Administration to take more drastic efforts to suppress pro-German activities at home. The soldier who offers his life at the call of the country has a right, and his loved ones at home have a right, to demand that no power of the Government shall be left unutilized to suppress with an iron hand the traitors and the fiends inspired from the lower regions who are seeking to drive into the backs of our soldiers the poisoned blade of the dagger.

It is time to call a halt on these activities, it is time to impose the death penalty upon some of these men and to see that those who are not out-and-out traitors but who are working for Germany shall be imprisoned and made to serve the country by hard work and not left free to increase the number of deaths of the soldiers who are to go on the battlefield.

Every mother and every father, indeed every

one in this country, whose loved ones are going out at the call of the nation, has a right to demand that the nation shall give this degree of protection to these soldiers. We will be recreant to our responsibility, and the blood of these men will be upon this nation if it does not do its duty in this respect.

IMPROVE THE WATERWAYS!

"GERMANY is now, at this time, in the midst of war, digging canals to link up its rivers as a national means of transportation to carry out its well-laid plans to defeat us," is a declaration made by Alexander C. Chenoweth, A.M., LL.D., Consulting Engineer of New York, in a recent letter to the New York Times.

"So great is the hue and cry about 'pork barrel' that our Congressmen from the valley of the Tennessee have almost been silenced. Germany did not make the mistake that this country is making in the neglect of its internal waterways. The reason Germany has held out so long has been explained largely in the word 'transportation.' And the transportation system of Germany is one that depends on rivers and canals for one-half the shipping, and the state-owned railroads work in co-ordination with the state improved waterways.

"When will we wake up?"

Thus says the Chattanooga News in a recent editorial discussing figures that show freight rates between Pittsburgh and Davenport, Iowa, to be about half the rates between Pittsburgh and Chattanooga, although the distance by water is about the same. The reason is that the Mississippi and Ohio rivers are improved, while the Tennessee is not navigable from its mouth all the way to Chattanooga.

There will be no adequate improvement of the rivers and harbors of the country till the whole people wake up and demand it.

It sounds very virtuous for newspapers and would-be Statesmen to cry "pork barrel" over every proposition to have the Government appropriate money to make navigable a stream on which boats cannot now run, and this indiscriminate clamor is responsible for halting work on numerous meritorious projects—projects which had run the gauntlet of the exceedingly scrupulous and discriminating Board of Army Engineers, as every project has to do before it can become incorporated in the Rivers and Harbors Bill of Congress.

The railroads are physically incapable of handling the freight traffic of the country. Communities and corporations cannot provide the funds requisite for river and harbor improvements, and are frequently prevented from doing anything in that direction, as witness the refusal of Congress to repeal legislation preventing the construction at this time of dams on any of the streams of the country classified as navigable.

With safeguards, capital might be found to do a great deal of the work required in the improvement of some of the rivers; but the present attitude of Congress is that of the dog in the manger—it does nothing adequate itself and permits no one else to do the work.

When the people will begin to think, will take the trouble to inform themselves as to what Europe—and particularly Germany—has done in the way of developing transportation on every stream, even the smallest, narrowest, shallowest and crookedest—to the tremendous advantage of every interest, agricultural, industrial, commercial and national, it may be possible to secure recognition in this country of the importance of making navigable the streams of the United States—every one of them that can be made to float a boat.

TWO-YEAR MUNITION CONTRACT.

THE MANUFACTURERS RECORD understands that one of the big munition plants in Canada making shells for the British Government has recently received a contract which will keep it busy for the next two years. Evidently the British Government is either not anticipating any early ending of the war, or else it wants to be abundantly prepared for all emergencies.

"Talk of Peace Now a Crime and Would Be Supreme Catastrophe to the Church of God."—Dr. Newell Dwight Hillis.

PEACE without punishment of Germany and those responsible for the greatest aggregation of horrors which mankind has ever known would be a premium upon crime. This is the position which the MANUFACTURERS RECORD has taken from the beginning of Germany's subtle propaganda to try to bring about peace on its own terms or peace on any terms other than unconditional surrender.

Germany has two motives in this propaganda for peace which her spies and agents are aggressively working all over the world.

One is—and this is probably the primary one—to create the impression that Germany is weakening, and that Germany is ready to ask the world to grant her peace in order to make us lessen our preparation for war.

The other is that Germany knows that if she could secure peace without punishment, she would in effect have won the war, and would be stronger to get ready for the next war which she would unquestionably bring upon the world whenever she saw her opportunity.

Viewed from either standpoint, this country and the Allies could make no more serious mistake than to give any heed to this German peace propaganda. It is hypocritical and as rotten as are all of Germany's methods.

We do not believe that Germany is at all beaten. We wish that we could believe that she is ready to beg for peace, but Germany is trying to deceive the world in this as in other nefarious schemes. It is doing all in its power to create the impression in this and other countries that it is not necessary to go forward with gigantic plans for the prosecution of the war, on the theory that Germany has already reached the limit of its fighting ability. Germany has not reached its fighting ability. Its people are not suffering for food to the extent that Germany is trying to make the world believe.

Germany now dominates a compact region nearly one-half as large as the United States, and instead of our widely-scattered area, much of which is uncultivated, and much of which is badly cultivated, Germany is intensifying the cultivation of the vast area under its control by the power of machinery. Germany and Austria and Turkey have not yet had to endure any of the awful sufferings of the invaded lands. Their countries are still free from invasion, and their peoples know nothing of what destructive invasion means, and they can never know by personal experience what German methods of invasion mean to the country that German soldiers have overrun, for no other soldiers on earth could be guilty of quite the degree of crimes which have been openly committed under the direction and permission of German officials.

German methods of warfare were outlined by German philosophers and military men long before this war commenced. "Frightfulness" was stated to be a necessity whenever Germany should enter upon the next war, and the practical destruction or deportation of the population of the overrun countries was proclaimed as a necessity in order that these countries might be peopled by Germans.

This view of the case was stated by many German writers long before the war. Treitschke, one of Germany's most noted writers, said:

"The Germans let the primitive Prussian tribes decide whether they should be put to the sword or thoroughly Germanized. Cruel as these processes of transformation may be, they are a blessing for humanity. It makes for health that the nobler race should absorb the inferior race."

Another German writer said:

"By steeping himself in military history, an officer will be able to guard himself against excessive humanitarian notions. It will teach him that certain severities are indispensable in war, nay, more, that the only true humanity very often lies in the ruthless application of them."

Nietzsche said:

"Deep in the nature of all of these noble races there lurks unmistakably the beasts of prey, blond

beasts, lustfully roving in search of booty and victory."

Another German writer in 1901 said:

"Whoever enters upon a war in the future will do well to look only to his own interest and pay no heed to any so-called International Law. He will do well to act without consideration and without scruple, and this holds good in the case of a war with England."

And the same writer at another time said:

"The more pitiless is the *vae victis*, the greater is the security of the ensuing peace. In the days of old conquered people were completely annihilated. Today this is physically impracticable, but one can imagine conditions which should approach very closely to total destruction."

These are but samples of hundreds of illustrations of the German spirit prior to and since the war, and yet there are people in this country who talk about making peace with such beasts! It behooves us to awake to the fact that Germany is doing all in its power to create the impression that it is being weakened for the express purpose of causing us not to crowd to the utmost of all possible energy our preparation for war.

Discussing in his pulpit last Sunday this peace propaganda of Germany, Dr. Newell Dwight Hillis said:

"Talk of peace now is a crime, and would be a supreme catastrophe to the Church of God." This sermon was summarized in its report by the New York Sun as follows:

"Germany's invisible peace propaganda, a silent, subtle menace, emanating from 'a great master spider at Berlin,' has fastened itself upon the capitals of the world, has penetrated to homes, newspapers and platforms in every American city. This was the message delivered by the Rev. Dr. Newell Dwight Hillis to a throng at Plymouth Church, in Brooklyn, yesterday morning.

"A situation critical to the world has been created by this insidious influence, said Dr. Hillis. He exhorted Americans to attack it, to fight it off, at the table, on the street, in the train, as the instrument, the hope of a Christ destroying government, secure in the possession of conquered lands.

"It was the fourth of Dr. Hillis' war sermons, and its title was 'The Peril of an Inconclusive Peace.' When the clergyman arose to speak listeners were sitting on the pulpit steps, the pews being full.

"To have this war end without a decision," said Dr. Hillis, 'a decision pronounced by an international court of the civilized nations, would mean the wreckage of civilization. This war can never end until a court is organized, all the facts are in, until the charges of crime have been weighed and proved and the judicial penalty pronounced. Germany is like Cain, who murdered Abel. As an outcast Germany, with Cain, is a wanderer through the night and the storm. There should be but one word in the town to every proposal for German peace, namely, unconditional surrender.'

"Dr. Hillis referred to the insistent urging of men everywhere for peace, and the discovery in unexpected places of German intrigue.

"Now an explosion takes place in Italy, through the discovery of a German plot, and now in Paris, through the tracing of a slush fund, and now in our own country the Government announces that it has traced fifty millions of Germany money, spent upon newspapers, magazines, legislators, reporters, men of position and influence. Just as Germany gave twenty-five years of time and billions of money in preparing for a war that should break men down, now she has placed, it is believed, two hundred and fifty millions in five great capitals in the attempt to prepare the Allies for a German peace."

"The peace propaganda was described by Dr. Hillis as 'a vast scheme to bribe, coerce and influence. At first its sinuous, tenuous threads were utilized for war and now for peace. Nothing in Germany's plans for war are nearly so startling as her plans for peace. Multitudes innocently have

become influenced by the skillfully-laid propaganda. It is the American people's most subtle danger.'

"Dr. Hillis said Germany's plan of conquest made in 1892, sought the subjugation of two hundred and fifty millions of people. Nine-tenths of that plan had been successfully carried out, he added. Should peace be declared on Germany's terms, notably the relinquishment of Belgium and Northern France, she would give up ten millions and retain one hundred and forty millions of people. This, coupled with the fact that Germany is still intact, would mean a resumption of warfare in a short time, perhaps five years, while the bleeding Allies were slowly recuperating.

"Words of peace now are a form of crime against civilized society," said Dr. Hillis, and there were vigorous nods of approval when he spoke of peace now as the 'supreme catastrophe to the Church of God.'

"Our people here must not be lured into peace discussions in clubs, houses and elsewhere. I trust that women's clubs in this town will think of this. I trust also that men and women will see that vilification of our Allies stops. This war is simply a struggle for liberty, justice and democracy as embodied in Christian principles. Mankind can survive the loss of this generation of boys—American, English and French—but one thing mankind cannot survive, namely, a compromise with German lawlessness, German militarism, German cruelty and crime."

SECRETARY McADOO ON THE POSTAL BILL AND THE NEWSPAPERS' STAND FOR THE COUNTRY.

WE believe all newspaper readers, for they are the ones vitally interested, will be glad to learn from a letter of Secretary McAdoo to a Georgia man, that he was opposed to the postal bill as passed by Congress. On this point Secretary McAdoo very properly said:

"As a matter of fact, I am not in sympathy with this legislation and have said that I thought it had no place in the revenue bill; that this was an inopportune time to raise the issue and that it ought to be considered upon its merits in connection with postoffice legislation and not with revenue or treasury matters."

This statement as to the views of Secretary McAdoo are interesting in connection with a report of the Senate Committee on Printing which recommends the operation by the Government of the print-paper and pulp industries of the United States during the war. The report says the Federal Trade Commission's findings "show beyond any question that the print-paper industry, in its greed for excessive profits, has imposed a most unjust burden on the American press, which faces a serious disaster if relief cannot speedily be had from the oppressive prices now exacted for print paper." It adds that the commission, in its recent investigation, exhausted every resource at its command to obtain relief for the publishers, but has been able to get only a small measure of relief owing "to the defiant attitude assumed by the principal producers of print paper and lack of authority of the commission to enforce its findings as to a fair and reasonable price."

Under the recommendation of this committee, if it should be adopted, the Trade Commission will be empowered to control production and distribution of print paper and mechanical and chemical pulp in the United States, and all the print-paper and pulp mills and agencies will be operated on Government account.

The reason for this drastic action, as suggested by the committee, is that "most of the newspapers of the country are now up to the point where they must soon renew contracts and if adequate relief is to be had, it must be without waiting for prosecution of indictments and complaints against paper manufacturers," and the report concludes with the following statement:

"The committee submits to the Senate whether it is better to safeguard the continuance of a free press in this country by assuring it an adequate supply of print paper at a fair and reasonable price, or whether to permit a further increase in the excessive profits of the paper industry, which the Federal Trade Commission declares is about to exact \$17,500,000 more in excessive

profits from the American publishers who are loyally and patriotically supporting their Government in this fateful hour."

According to this report, the paper manufacturers are about to exact an additional \$17,500,000 of profits from American publishers, on top of \$105,000,000 already piled on above former costs. The MANUFACTURERS RECORD, for instance, has for a year or more been paying 100 to 150 per cent. more for its paper than it paid two years ago.

The interesting point, however, in this whole report is the anxiety of this Senate Committee "to safeguard the continuance of a free press in this country" on the ground that this is essential to the welfare of the nation. The amount of additional profit which it is said the paper manufacturers are proposing to take from the newspapers is stated at \$17,500,000, but at the very time when this report was being prepared, the Senate and the House were passing a bill which would add much more largely to the burdens of many publishers than this increased cost of paper about which the committee is so much concerned, and this increased postal rate, established by the zone system, is far more hampering to many than the higher paper bill which the committee fears is to be forced upon the newspapers by the paper men.

With one hand the Senate tries, in the interest of the nation, to defend the newspapers and to secure a free press, and with the other hand tries to stab the papers in the back. Very properly Secretary McAdoo says that the proposed increase in the postal rate and the zone system is not justly a part of the revenue bill. It had no place in the war revenue bill. It is a postoffice bill and never should have been brought into a war revenue measure, for the newspapers could be reached through taxation on their capital and on their profits, just as other business interests can be reached for war revenue purposes. This bill was tacked on to the revenue bill merely to get through Congress a measure which those who have been antagonizing newspapers have for years sought to pass, but which they were never able to pass as a legitimate bill.

Again we want to repeat that the MANUFACTURERS RECORD and every other reputable paper in this country is ready to go the utmost limit of taxation on its business or profits. Whenever the Government finds it necessary, it can tax the profits of this paper 100 per cent. In order to maintain the war, and this unjust bill as passed through Congress will not, in the slightest, lessen the enthusiasm of this paper or any other reputable paper in fighting for the nation's welfare, in giving to the Liberty Loan all the space without cost which the Government may ask, and in greatly increasing expenses over pre-war times for the express purpose of arousing the nation to the situation.

This is *our* country and *your* country, and every man in this nation, without regard to how he may feel as to the question of the wisdom or unwisdom of certain legislative action, must say "THIS IS MY COUNTRY" and give his life and his business and all that he has, if need be, to saving "MY COUNTRY" just as he would give his all to save his family from rapists and murderers.

SOME MEN ARE A NATIONAL LIABILITY, INSTEAD OF BEING A NATIONAL ASSET.

MANUFACTURERS RECORD,
Richard H. Edmonds, Editor.

Baltimore, October 8, 1917.

Hon. William G. McAdoo,
Secretary of the Treasury,
Washington, D. C.

My dear Mr. McAdoo:

My heartiest congratulations upon your letter to Dr. Stockbridge of Atlanta, President of the National Farmers' Congress, in which you so vigorously score him, and justly too, for his refusal to co-operate in placing the Liberty Loan, on the supposition that you and the President had favored the proposed increase in postal rates.

I regret that any man in this country could presume to speak for any papers in the country, in thinking that they could be bribed by the question of postal rates in working for or opposing the Liberty Loan.

The newspapers of the United States are not run by that kind of men. The MANUFACTURERS RECORD believes that the proposed zone rate is unwise, but what has that to do with a question of the support by the

MANUFACTURERS RECORD and any other newspaper of the Liberty Loan? Any man who takes the position credited to Dr. Stockbridge of refusing to work for the Liberty Loan because of the advance in postal rates on newspapers should be classed exactly as you have done in the statement in which you said:

"If you really entertain the sentiment you have expressed in your telegram, it is a pity that these brave men must fight for you because you are not worth fighting for."

It is a pity that the soldiers who are offering their lives for the womanhood of this nation and the womanhood of civilization, for the very existence of our country, must have to fight to protect many thousands of this class, and I am afraid many tens of thousands, who are not worth fighting for and whose presence on this earth is a liability to mankind instead of being an asset.

I need not assure you that all the space which you can want to use in the MANUFACTURERS RECORD in behalf of the Liberty Loan is at your service and without charge. But entirely outside of this offer to the Government, the MANUFACTURERS RECORD, as it has from the beginning of the first work of the Liberty Loan, has concentrated all possible energy to arousing our people to the fact that the Liberty Loan is their business and that they must to the utmost extent of their ability help through subscribing to the Liberty Loan to make sure of our not being forever dominated by German barbarism. I am sure that in this respect the MANUFACTURERS RECORD is not unlike every other decent paper in America, and those which do not hold this position, if there are any, should be characterized in the same way as you have referred to Dr. Stockbridge as being "not worth fighting for." Unfortunately, such people have to be saved sometimes merely because the country must be saved.

Very truly yours,

RICHARD H. EDMONDS.

We believe the views expressed in the foregoing voice the sentiment of every decent newspaper in the United States, for every such publication, even if unwise legislation destroyed it, would still, with its expiring breath, sing "My Country, 'Tis of Thee," and hurrah for the Liberty Loan and all that it stands for!

A WOMAN'S VIEW OF THE GERMAN SPY SYSTEM AS IT AFFECTS THIS COUNTRY.

ONE of the most remarkable women in America is Mrs. G. H. Mathis, a woman of great force and ability, who has been a welcome speaker before many gatherings of noted financial men of the country, as she has explained to them the business and agricultural conditions in Alabama, representing, as she has done in this campaign, the bankers of Alabama.

In a speech at Piedmont, Ala., some days ago, Mrs. Mathis, who is noted for the vigor of her language, but at the same time for the truthfulness of it, made some statements in regard to the work of German spies which need to be heeded. Among other things she said:

Unless the German spies in America cease their disreputable operations the American people will rise up and hang at least one hundred thousand of them.

The Piedmont Journal, commenting on this address, said:

Mrs. Mathis never appeared more dead in earnest than when she denounced the German spies in America and advocated their rapid extermination. "Her only son is bound for France, and his life," she said, "is imperilled by the German spies that are harbored and protected in this country."

"When the news comes back from France," said she, "that some of our boys have with their blood crimsoned the fields of France, it will result in wholesale execution of German spies within every State of the American Union."

Further quotations from her speech, with comments by the Journal, are as follows:

"I am representing Mr. Hoover, the Food Administrator, and the Government. I come to you direct from Washington, and this, I hope, you will immediately appreciate."

"Alabama is my own dear home. I was born and reared at Florence. This is your own dear home, and we must realize, all of us, men, women and children, that we face a most serious war. I bring you the solemn warning of our Government at Washington that because we have no armies fighting on our shores is no reason that we are not earnestly engaged in this deadly conflict. I declare to you that if Germany wins we will be invaded in 30 days. This is a fact that is known by our President, God bless him, and all of the statesmen at Washington. I hate to tell you this, but God knows it is the truth."

"America is honeycombed with German spies. Mexico is likewise honeycombed with these scoundrels. South Amer-

ica and Cuba are peopled with them. And the German Kaiser brags about the fact that he has a half million men in America that will turn upon us at his word, and they are trained soldiers. I want to ask you what would Germany do if we boasted that we had a half million spies in the German Empire? I will tell you. They would hunt them down like lions, and they would kill them just as fast as they were found. That is what Germany would do. And, my friends, I want to warn you solemnly that we must go lion hunting. We must search them out here at Empire, in Birmingham, in every nook and cranny of America, give them a trial if you think best, but hang them high as Haaman just as fast as you find them. I hate to tell you this, but it is time we were getting mad. We must give Germany a dose of the medicine that she arrogantly and boastfully gives the remainder of the civilized world."

Mrs. Mathis gave a short history of German aggression and her disregard for neighborly relations and solemn treaties, and then launched into a denunciation of the Germans higher up that take advantage of our democratic laws and hide behind them while carrying forward their deadly propaganda. She then recited three propositions that she wished every American to bear in mind:

"1. Watch the Mexican border, for there is a terribly weak spot."

"2. Hang the spies. Root them out. Go lion hunting. Don't let up."

"3. Organize a home guard, and don't let dissension creep into the American family."

"Do as Ambassador Gerard promised the Kaiser," cried Mrs. Mathis. "For when the Kaiser said he had 500,000 spies here, Mr. Gerard said we had 500,000 telegraph poles on which to hang 'em."

Mrs. Mathis said the people were wasting too much. She appealed to them to save; save and keep on saving.

She impressively pointed her arm out to assembled miners blackened with grime from the mines and told them not to cease in their work of digging coal.

"For food can't be cooked," said Mrs. Mathis, "ships can't cross the seas, machine factories can't be operated unless you men furnish the coal. Let me beseech you not to tarry. Work early and work late, and let every pound of coal count."

She paid a glowing tribute to the coal digger when she declared in ringing tones:

"For every ton of coal you send out let your prayers to God be upon it. Christ calls upon you to go down into the bowels of the earth and bring out the treasure of coal that He has placed there, to the end that this German monster may be crushed. It is the treasure of Jehovah that you are mining, and with every pound of it you fire a shot across the lines into the Germans. God Himself will bless you in your work, and oncoming generations will call down their blessing upon you if you stand by your duty, as I believe you will."

To the farmers before her Mrs. Mathis appealed that at least five acres be planted in wheat that we may have an abundance of bread for our folks and some for our allies. She advocated raising sheep instead of dogs and cattle instead of ticks. Mrs. Mathis reiterated her plea for harmony among all classes, and said a united people, an earnest people and a consecrated people would convince all Germany of our intention to carry this war through.

Mrs. Mathis made the statement that the farmers had increased the food crop in this State in one year \$200,000,000 through personal appeals, and she was appealing to all people now to practice economy, work hard, save money, and in this wise help to whip the Germans.

After Mrs. Mathis closed her speech the miners blackened with grime, farmers, women and children crowded around her and congratulated her upon the speech. It was added by many of the men that if any German spies are caught in that section that they would deal with them without any foolishness. The statement was made that Mrs. Mathis was right in that the American people should get mad and start some wholesome work to rid this country of the spy.

Mrs. Mathis said that every mother who had given a son to the American army, as she had, and every person that had parted with a loved one should keep behind the German spy system until this country was free of them. She said that she did not mind so much her son fighting to make democracy safe on a battlefield, but she did not intend to stand idly by and see him murdered by an assassin in the back.

Following the publication of the address of Mrs. Mathis Monday by the Birmingham Age-Herald, it was reported to Mrs. Mathis that at least 100 spies had left Birmingham, saying that some of the hot-headed Southerners might start a lynching bee. This information was published in the Age-Herald for Tuesday.

From all indications the spy system is most menacing in Alabama as well as other States in the Union, and action should be taken without delay.

As Mrs. Mathis says, "We should begin to get mad."

CLASS IN NATURAL HISTORY.

Teacher—"Jimmy, name the king of beasts."
Jimmy—"The Kaiser."

THERE may be some folks unkind enough to think that extraordinary outbursts of patriotism around the Capitol just now are to be regarded with suspicion.

BELIEVES THE OUTPOURINGS OF HELL WILL WIN.

E. K. VIETOR & CO.,

Leaf Tobacco, Strips, Stems and Scraps.
Rohaback U Stengel. Tabacs En Feuille.

Tabaco En Rama y Picadura.

P. O. Box 555.

1800-2200 Semmes Avenue,

Richmond, Va., September 13.

Richard H. Edmonds, Esq.,

Editor and General Manager,

Manufacturers Record,

Baltimore, Md.

Dear Sir—Your circular-letter of the 10th inst. came just to hand. I hand you enclosed \$4 in renewal of my subscription for another year.

I do not think that your bitter articles against Germany are going to win the war; in fact, there is, according to my judgment, no more chance that Germany will lose this war than that the sun will rise in the west tomorrow.

The danger to this country is not from an invasion by Germany, but from people who promulgate hatred and bitterness. Unless your articles are inspired by malice, they are based on gross ignorance of Germany and German institutions. Don't you think you could do more good to live up to the title of your paper and write about trade and trade opportunities and leave the war making to the people who have the conduct of the war in hand?

Yours respectfully,

E. K. VIETOR.

Mr. Vietor is very frank in the foregoing letter in expressing his view that there is no possible chance that Germany will be defeated in this war, and his view that the danger to this country is not from an invasion by Germany, but from people who promulgate hatred and bitterness. Mr. Vietor suggests that the articles in the MANUFACTURERS RECORD against Germany are inspired by malice or else based on gross ignorance of Germany and German institutions. He wants us to confine the work of the MANUFACTURERS RECORD to writing about trade and trade opportunities, and to leave the war making to the people who have the conduct of the war in hand. This advice is very kind and considerate on the part of Mr. Vietor, but we are unable to follow it. Perchance we may not be fully informed as to Germany and German institutions. Doubtless both are worse than we have indicated.

Germany sank the Lusitania.

And when Germany sank the Lusitania—one of the vilest crimes ever charged against humanity—a holiday was given to celebrate the event, and some German preachers hailed it with great delight.

Germany and Germans were responsible for all the horrors in the invasion of Belgium and France.

Germany has bombed defenseless cities, and killed the prattling infant, and murdered innocent women and aged men.

Germany has caused a more awful ravishment of women than the mind of any human being could, before 1914, ever have dreamed of—unless it was the rotten mind in the rotten body of a rotten-souled German.

Germany has filled this country with spies. It has scattered its money broadcast over this land in the work of seeking to dominate this nation in the interest of Germany.

Germany sought to bring about an alliance with Mexico and Japan for the invasion of the United States by those countries.

These are only a few of the things that Germany has done; but perhaps the other things which Germany has done are much viler than we, in our ignorance, have thought about Germany and German institutions. Perchance Mr. Vietor, who seems to love Germany so dearly, may have information about other villainous, about other indescribable crimes, about other horrors, of which we are as yet ignorant. No man in this country can uphold Germany without countenancing and upholding the rottenest degeneracy which the world has ever known, and he who upholds unblushing crime is himself not far from being contaminated by it.

And then Mr. Vietor is as certain that Germany will not lose this war as he is that the sun will not rise in the west.

We give Mr. Vietor the benefit of the publication

of his letter and of the letterhead covering his line of business, and we take the liberty of suggesting to the Secret Service Bureau of the United States Government that Mr. Vietor needs a little of its attention, and we suggest that the sooner the Secret Service Bureau looks into the matter the better it may be.

We do not care to have Mr. Vietor as a subscriber, and we would prefer not to have any money that comes from any human being who, living in this country, can defend Germany, and who puts forth his belief in the success of Germany as against the United States and the Allies. We retain his subscription solely for the purpose of trying to throw some light into a brain and a heart that are as dark as his, even though the task may be beyond our power—and we are afraid it is. And he can have his money back any time he wants it, if he says that his soul is so wedded to Germany's barbarism that it can never be redeemed and brought into the light.

P. S.—We couldn't stand keeping such money, and so it has gone back to Mr. Vietor.

"BLOODY BREATHITT" COUNTY BECOMES A NATION'S LEADER IN PATRIOTISM.

ALL honor to Breathitt county, long known to the world as "Bloody Breathitt"! All honor to the men there who, though they may sometimes have been guilty of mountain feuds and have sometimes fought with unpardonable fury, have heard the call of civilization to protect the women and children! They have rushed to the army in a way which probably surpasses the record of any other section of the United States.

The story of what has been done in Breathitt, as published in the New York Herald, should be read throughout the land. It is a story of patriotism that knows no limit. The population of the county is about 18,000, but the Herald's story says that that county has given more volunteer soldiers than Arizona, Delaware, New Hampshire, North Dakota, Vermont or Wyoming.

Alexander Hamilton Hargis, a banker of Jackson, in that county, says that about one out of every four voting men in the county has already gone into the army, and that the rest of the voting population is ready if the country needs them, and he credits Lee, the adjoining county, with having the same spirit and its people with doing the same the men of Breathitt have done. "There is no hyphenism down here," said Mr. Hargis, "and we do not know what it is. At the beginning of the European war we regarded it as a matter of indifference, and at that time we thought it wise to let Europe fight its own battles. No one liked the Lusitania business, but still people kept quiet and went on farming. But when stories about the way Germany was treating women and children and shipping old folks into slavery began to come over here, things were different. Then it became our war."

And then comes this interesting and suggestive sentence: "There were two or three persons around about here who defended Germany for a short while, but they stopped. There won't be any more."

Col. J. L. McCoy, owner of the Jackson Times, who has been vigorous in his campaign for patriotism, is quoted as being deeply worried lest the Allies give Germany a breathing spell, for that he asserts is all that Germany wants, and that is why her people are talking peace.

"The world must give Germany a licking," he said. "She has trampled on the rights of the world and of humanity. She is a beast. She has genius, of course. So has a bank burglar or a clever horse thief. If Thomas A. Edison had spent his time perfecting schemes or devices for robbing vaults he could be richer than the Rothschilds and Morgans combined. If the United States had spent all her time figuring out ways to kill and subjugate and had grown to practice treachery and deceit, she could lick the world with one hand tied around her neck. Germany does not deserve any credit. She is a gunman gone crazy. She has murdered, pillaged, ravaged and outraged, and now that she is caught up in an alley, her hands dripping and her gun smoking, she wants the world to listen while she says: 'Come on, now. I'm through. I've killed your women and

children, but my ammunition is all gone, so let's call it all off and begin where we left off. Maybe I won't do it all again.'

"You know what we would do with a man in Kentucky who acted like that, don't you? Of course, everyone does. Well, that's what the world ought to do to Germany. When a man uses brass knuckles you can't get anywhere fighting him with feather pillows. That's what the Allies have been doing. We ought to drop bombs on all their cities. Give them as good as they send.

"We live up in the mountains here, but we get the papers from outside, and we know what Germany has been doing. We are for the administration—every man and woman of us. We are ready to go to war—every man and woman of us. We know it's the world's fight. Sometimes away down here I have blue moments, when I think that maybe the world will let Germany settle up without getting punished. I hope not."

The Herald's writer says:

"In many ways the region is primitive; it is primitive in its patriotism; it is primitive in its rugged honesty. A thief is a thing unknown. Crime, except 'bad conduct and shooting or cutting,' is almost unknown. A mere shooting attracts little more attention than a case of disorderly conduct in Sixth or Eighth avenue, New York. The principal in a feud shooting loses none of the respect of the community. These things are expected. But if a man affronts a girl or hurts a defenseless man or woman there is 'something going on in his immediate neighborhood.'

"That, no doubt, explains in part the intense hatred felt in these mountains of Kentucky for the people of Germany. And they don't restrict their hatred to the Hohenzollern family. They include the entire German nation within the range of their zealous hate, and say very frankly that a ruler is only as bad as his people. There are perhaps a dozen men of German ancestry in this county. One of them at the outset of the war expressed himself as favorable to the Kaiser. No one will tell exactly what form of discipline was used, but the fact is that this particular man of German sympathy has since remained on his own farm and has spoken to nobody on the war."

Mr. Lucien Beckner, a mining engineer of Winchester, Ky., is quoted in this article as saying:

"The people all over Eastern Kentucky think Germany ought to be licked good, and they are ready to help. A woman right here in this town has three sons in the army, and she says she hopes they will get to Europe right quick. She loves those sons just as much as any woman in the world, but she knows what Germany has been doing to women, children and old folks, and if there is one thing the people of this county won't stand for, it's that."

And Jim Powers of Breathitt county, a bridge tender, expressed his views on the subject by saying:

"Them gunmen in Germany are a bad lot. We've got to lick 'em good. We hope down here there'll be peace, but we hope there won't be no peace till they've licked Germany stiff. Down here we don't like this way they have of treating women and children. There is something wrong with a nation that can do things like that. We're brought up down here to respect women and old folks and be kind to children, and the Germans ain't kind and respectful to nobody."

If Breathitt county had been called on for the draft her quota would have been about 200 men; but before the middle of June, the call having been posted in May, more than 200 men had volunteered, and still they keep coming; and since the call for volunteers was issued more than 400 men of the county have been accepted for service—more than twice the number that would have been drafted if there had been no volunteers. It is impossible to tell exactly how many Breathitt county men are in the service, but the number is estimated by local authorities at from 1000 to 1200, though the total number of men registered in the county between 21 and 31 is 1549. The percentage of Lee county is about the same, and volunteers are still coming in.

And in this spirit of Breathitt and Lee counties to come to the help of the country, to save civilization from ruin, they have redeemed themselves before the world and showed the inherent strength of manhood which lives in that region ready to answer to the call for help wherever women and children are attacked.

FIGHTING HOOVER'S CAMPAIGN FOR FOOD CONSERVATION HELPS GERMAN DIRECTLY.

"WHAT are the poor people and men of moderate salaries to do in view of the increasing cost of living?" asked an intelligent minister sitting in the office of the MANUFACTURERS RECORD.

"I have no faith in your friend Hoover," telephoned an intelligent woman, and when asked the reason said because Hoover had not reduced the cost of foodstuffs, and she was thinking, not of herself, but of poor people.

These two questions are typical of the questions that millions of people, who ought to have the capacity to think, are asking, apparently without putting their thinking apparatus to work. The minister, a broadly informed man on general subjects, was densely ignorant of the actual conditions of this world war and the shortage of foodstuffs and of the necessity of conservation. The question that confronted him was the personal question of how shall the man of limited means care for his family in these times of rising prices.

The good woman who telephoned her condemnation of Hoover should have understood the situation, but, like millions of others, she did not, and she was blurring out a condemnation of Hoover's work which, in its influence for evil, could scarcely have been improved upon by German spies, for every time she repeated the question to herself or to others she spread the thought of a false conception of the whole situation.

Had the preacher comprehended the full significance of this world tragedy, he would not have concerned himself so much about the rising cost of living, for he would have gone out and given his life to preaching to those poor people and to all others the reality of this hour, which must bring sacrifice and suffering to tens of millions and which the people must be taught to endure heroically, just as the soldier on the battlefield meets the sufferings and the privations and the agony and, perchance, the death that comes to him as he does his part of the work. Here are people back at home thinking in terms of personal comfort, thinking of living as they did before the war, or, perchance, of saving a little here and there, but having no thought whatsoever that this nation, to a large extent, must learn the same spirit of sacrifice in the home as that of the soldier on the battlefield.

No man has a right to expect that he shall not have to sacrifice to the utmost limit of his strength. He must, if need be, wear his old clothes and his old shoes, and count them as a badge of honor, not simply to save, but because the soldiers need the clothes and the shoes and the nation needs the work of the men who make these things. The man or woman who buys unnecessary clothes or shoes or hats or bonnets is taking the needed clothes from the backs of the soldiers, is making them suffer from lack of shoes and is tying the hands of this great nation as it struggles to free itself from the deadly grasp of Prussianism, which even now has its strangle hold upon the nation's throat.

Hoover cannot overnight increase the food supply, nor can he awaken the people so steeped in thoughtlessness, as most of our people have been, to the necessity of food conservation. He can war against wastefulness, he can fight in behalf of food production and food conservation, but there is no power given unto him, nor to this Government, nor to any other government, that can overrule conditions as they exist and undertake to make two and two five instead of four. We might just as well attempt to change by edict the multiplication table as to undertake to berate Hoover and the Government for inability to change the multiplication table of human necessities and the shortages in connection therewith at this hour.

It behooves every woman who loves this land, who loves her womanhood and the safety of her daughters and the future freedom of her sons, to think no thought, to utter no word of disparagement to the Government in its effort to increase food production and to bring about food conservation. She who acts otherwise, it matters not how patriotic she may think she is, is endangering the safety of womanhood, and, to the extent of her influence, is bringing

about conditions which would duplicate in America the horrors which have been endured in Belgium and France and Serbia and elsewhere.

The preacher and the teacher, every man, indeed, who has any thinking power or any power of expression to tell the situation to others, is recreant to his responsibility to God and to man if he does not go out and, from every platform and every pulpit wherever he can make his voice heard, explain the situation, teach the people that sacrifice is essential and that he who thinks first of his personal comfort or his inability to provide for his family as freely as in the past because of increasing prices, or criticizes these conditions, is failing to do his duty to God and to man.

Would that some man might be gifted with the power to drive these truths into the heart of every man in this country ere it be everlastingly too late!

HOW A VIRGINIA WOMAN WORKED TO AROUSE PATRIOTISM.

THERE is great need for arousing the people throughout the country districts to the realities of the war and to the need of food conservation. Here and there in all these country districts there must be people who can take the lead in this work, and leadership is what is needed. It is incumbent upon the preachers and the teachers to make use of the pulpit and the schoolroom to awaken the people to the dangers which confront us and which endanger all civilization. The minister who thinks that the pulpit is not the place from which to discuss the war has no conception himself of the war or its meaning. Here is something greater than anything, and indeed than everything which has happened in the world since Calvary, 1900 years ago. Here is the struggle of barbarism to suppress civilization, the struggle of atheism and agnosticism as represented in Germany to crush out all that the orthodox churches of this and other lands stand for. The preaching of individual salvation to the individual man or woman will amount to but little in the years to come if there be no preaching from the pulpit at the present time to help to save the world from the destructive power of the Evil Spirit represented by Germany.

What may be done by one man or one woman who sees the situation and who aggressively works at it, is interestingly told in a letter from Mrs. Ina Colson of Herndon, Va., to her uncle, Mr. Charles Robinson Smith of New York city. Neither Mrs. Colson or Mr. Smith had any thought of this letter ever being published, but when a copy of it was received in a personal letter sent to show the need of arousing the people of the country districts, permission was asked to publish it. This was given in the interest of the nation's welfare. It must be read, therefore, in the light of a letter never intended for publication, but as a family letter giving some inside facts in regard to the lack of interest on the part of many people even in Virginia, and how a community was awakened. As a family letter from this point of view it is far more interesting than it would have been as a formal letter intended for publication and from which would have been omitted all of the little sidelights which illuminate the story.

How many other women in the whole South, and the West, and the North, and the East, will take up in the same way work such as Mrs. Colson did to stir her community in Virginia? Mrs. Colson's letter was:

Dearest Uncle Charles—You have always been so interested in the pulse in the different parts of the country in regard to the war that I thought you might like to have a letter about this quarter.

In the first place, I bought a collection of war books which I put into the library through the literary club here. The club is taking turns reading the books and giving resumes in an orderly way at the different meetings. Also I purchased the President's message by the dozen and am trying to get that read in the homes. Then I've been able to buy some wool for the knitters, and am getting quite a group of knitters going. Then I've invested heavily in jars and sugar, and have done up all possible fruit as an example to the natives to give a part of theirs. Then I've helped with the canning demonstrations.

Of course, we have a group of intelligent lawyers here from the city who are in despair at the attitude of the natives, who are concerned only with their exemp-

tion papers. They loudly proclaim that Wilson forced us into war—or that it is a money-making scheme of the "interests" or ammunition makers—or that if we had stayed off the Lusitania we wouldn't have been in, and all the dregs of which the human mind is capable. So, finally, Hugh said that the people simply didn't understand, that the only men they would come to listen to would be their county idol, Walton Moore, and a favorite of the next county, Colonel White, and that the form of festivity which would appeal to them would be a rally. So we got one up, though everyone said that we couldn't get over 25 people possibly to listen to anything on the war, as it was such an unpopular subject—that everyone was still insisting that it was not our war. They resisted the food cards from Hoover, and some said that they would rather be under the Kaiser than to have their private affairs meddled with, etc. Well, we had our 500 posters in red, white and blue:

PATRIOTIC RALLY!

DARLINGTON GROVES, HERNDON, VA.,

4th August, 1917, Saturday,

In Honor of the Boys Who Are to Maintain the Proud Tradition of Virginia.

HON. R. WALTON MOORE OF FAIRFAX,
COL. E. B. WHITE OF LOUDOUN,
And Other Distinguished Speakers.

EVERYBODY TURN OUT!

The posters were torn down three times. We had asked that all the conscripted boys sit together in the front and middle, as it was their party, but they all went out of town except the young scoutmaster and a young cousin of Hugh's, who has all that one should expect of a young Virginian and who has tried to get in every department of service, but who has been turned down, to his despair, because of diabetes.

Well, just before the party by two days, Colonel White wrote me that he couldn't come, so we thought there would be neither speakers nor audience. So Polly and another girl got together, and with a single day's notice went to the Senate and House officers and kidnapped Collier from Mississippi and "Tom" Heflin of Alabama, also a Mr. Seymour of New York, who has been making speeches for the Government. Well, the young girls made a bower of a stand modeled after one at Forest Hills. Hugh treated us to the best band in Washington.

I got a great French and British flag and all the little ones—thank you! Mother gave them all a fried-chicken dinner. The speakers were sent for in two seven-passenger touring cars, and the girls and Boy Scouts set up a charming red, white and blue booth of ice-cream and lemonade for the Fairfax ambulance. Cleared \$25.

When we arrived we found, in spite of the local boycottings, the biggest crowd Herndon has ever seen—even a touring-car full from Augusta county! Mr. Hilton Jackson, an able young lawyer from Washington, presided. The meeting just flowed along in one beautiful old school of Southern oratory of the days which we believed over forever. They threw all the flowers of the garden at Virginia's lofty past and leadership in the cause of liberty; they presented the history of the war with telling clarity. Heflin is a charmer, and lured his audience through his personal magnetism into a quick sympathy, and then he went after it, driving in powerful points. Then Mr. Moore—an embodiment of all that Virginia had been—was so intimate and convincing by his calm and moderation, touched the right chord every time, and wisely instructed us all in what we each and every one could do, telling us that it was the highest tribute which could honor another Virginian—that was carved on his tomb, "He gave all that he had to Liberty!"

The speakers told someone, who told Polly, that in all the speeches they had made and in all the places they had never had a better time nor stood before a more attentive nor responsive audience.

Then Mr. Moore dined with us—after the others stopped off to again refresh themselves on their drive back to Washington—and when we asked what we must do to follow up this inspiration, he said to use the churches as patriotic organizations, so we are getting the ministers together to take the initiative in another for which we are to secure the speakers. Had the food bill not come up in the Senate that afternoon, we would have had John Sharp Williams, my favorite, and Watson from Indiana. Ex-Governor Montague and "Pot" Harrison—all to be counted on for next time.

You will smile when I tell you that I am explaining all the time and disentangling patiently the web of German propaganda in which our people are enmeshed. It is pitiful! They only know what the papers say. Hearst has bought the Washington Times, which is doing vicious anti-administration work. I am supplementing all that I learned from you and your wonderful household by studying and reading all the time and just becoming a messenger. So thank you for that great opportunity, and privilege, too.

We are having meat once a day and wheat bread once a day, conforming scrupulously to every suggestion from Hoover. Mother knits, cans and economizes—no waste! I must talk and preserve for soldiers. Polly contributes, talks and kidnaps speakers! Hugh and Clarence, as you know, are working days till 10 o'clock and Sundays, getting timber out for the barracks, camps, looking after their tons and tons of crops, and creating extra supply of milk in their big dairies, etc.

RESOURCES FOR IRON AND STEEL MAKING AND SHIPBUILDING SHOULD BE CROWDED TO LIMIT.

THE MANUFACTURERS RECORD is officially advised from New York and Washington that the rumor circulated throughout the country that the Steel Corporation had made a contract to build 50 ships at Mobile for the United States Shipping Board is not correct.

We greatly regret to receive this statement. We wish it were possible to announce that such a contract had been made, for it would mean additional safety to the nation's life and additional development to the iron and steel and shipbuilding interests of the South.

We do not believe that the Steel Corporation could do a wiser thing for its own welfare and that of the nation than to push as rapidly as possible the construction of the projected shipyard at Mobile, for which it has secured the site, and at the same time push as vigorously and as rapidly as possible the building of the plant near Birmingham in which to produce shipbuilding material. Not an hour should be lost in pressing both of these plants to completion as quickly as unlimited money makes possible.

At the same time we believe that the Shipping Board would be serving the nation in its broadest sense by taking up with the Steel Corporation some plan looking to the construction of ships at the proposed Mobile yard as quickly as this can be done.

The resources for iron and steel in the Central South are too great not to be utilized to the fullest limit in helping, through the building of ships, to save the nation and the world from destruction. The vast resources for iron and steel-making and shipbuilding are too great to remain unutilized, and the Shipping Board can well afford, if need be, to take the initiative with the Steel Corporation in urging the immediate construction of the proposed Mobile shipyard and the pushing of work as rapidly as possible upon the plant at Birmingham to produce the material for ships. Indeed, in view of the statement which Chairman Hurley of the Shipping Board makes through this week's issue of the MANUFACTURERS RECORD, it would seem to be incumbent upon the Administration and all Government officials to take the lead in calling into conference the iron and steel men of the country and in asking them in the name of the nation to enlarge their output of iron and steel and kindred materials to the utmost limit and with the greatest rapidity.

MR. CARL VROOMAN, ASSISTANT SECRETARY OF AGRICULTURE, AGAIN DEMONSTRATES HIS UNFITNESS FOR HIS JOB.

DEPARTMENT OF AGRICULTURE.

Washington, October 2.

Editor Manufacturers Record:

Dear Sir—When I made my tour through the South last spring, urging an increased acreage in food and feed crops, I laid especial stress on the amount of food and feeds imported by the South from the North and West, rather than on the amount of foods and feeds exported from the South to the North and West, for the simple reason that it was the excess of imports over exports which I regarded as the dangerous factor of the situation, both from the individual and the national point of view.

I am still of that opinion, and I am glad to state that so far as I have been able to learn, at least 999 out of every 1000 who heard me speak, or who read my speeches, agreed with me in that opinion, and that at least 99 out of every 100 papers who did me the honor to make any mention of my speeches expressed a hearty approval of that position.

Some time after your hysterical and grotesquely un-

fair article against me in the MANUFACTURERS RECORD of June 14 appeared, I sent out the enclosed statement so as to make sure that no honest and sane man could misunderstand my attitude on these questions. It was given to the United Press for release on Monday, July 16, and was by them, I believe, sent throughout the South. How widely it was published I am not prepared to say.

I am delighted to state that the extraordinary increase in efficiency of our railroads, brought about by the Railroad Committee here in Washington, has done more toward the solution of the car shortage problem than even railroad officials had dared to hope last winter. But even this fact does not in any way minimize the importance of each region of the country making itself, so far as is possible, independent of other remote parts of the country in the matter of foodstuffs. Our transportation facilities are still so inadequate that we may at any time have a fuel shortage, a hay shortage, or a shortage of other necessities of life in certain regions. I am told that New England has been and still is nervous about the possibility of a coal shortage this coming winter.

Though your article in the June 14 number of the MANUFACTURERS RECORD did not indicate any willingness or ability on your part to give a true statement of my point of view, I am writing this letter on the possibility that underneath all your unfairness and hysteria you may at bottom really desire to get at the real facts.

Yours truly,

CARL VROOMAN,
Assistant Secretary.

The foregoing letter is scarcely worth the space it occupies in these momentous times, nor the statement needed to reply to it. It is really a joke, but it very clearly indicates that Mr. Vrooman's resignation from the position of Assistant Secretary of Agriculture would be a distinct asset to the Government.

After waiting from June 14 to October 2, Mr. Vrooman writes the foregoing attempted explanation and criticism of the MANUFACTURERS RECORD. His explanation is weak, and we leave our readers to judge as to his criticism.

Mr. Vrooman made a trip through the South last spring and threatened all sorts of dire consequences in regard to the possible starvation of this section if it did not raise its own foodstuffs, on the ground that the South would be permitted to starve if necessary, as no cars might be available for shipping foodstuffs from the North and the West to the South.

After his return he wrote a letter to Mrs. G. H. Mathis, agent for the Alabama Bankers' Association, which she published in Anniston. In this letter he said:

"You remember about a month ago I made a tour through the South, telling the people of the various Southern States that the South must feed itself during the coming year or go hungry. When I made this statement I had excellent reasons for doing so, but for every reason I then had I now have ten reasons for saying the same thing.

"Our prospect for a wheat crop this year is the worst in my memory. Our wheat shortage must be made up by other crops. Unless the South does her share it will mean calamity and distress for our country, for our Allies, and for the neutral countries that, without food from us, will starve, and above all, for the South.

"For we are not going to ship provisions from the North and West into the South if our soldiers and the soldiers of the Allies, who daily are dying by the thousands in the trenches fighting our battles, require that food to sustain their fighting strength.

"Moreover, with the food rotting in the fields of the North and West, it is probable that for months at a time it will be utterly impossible to ship foods and feedstuffs into the South because of the fact that our transportation of troops, munitions, materials for shipbuilding, etc., that there will be no cars whatever available for transporting food from the North and West to the South.

"On this food question the South faces a very real peril. The Southern States can produce food as cheaply as any other States in the Union, but under the present circumstances it is merely the A B C of common sense for her to produce enough food for her own requirements, utterly regardless of cost.

"When a person or a State or a nation go hungry,

food is worth whatever it may cost to get it, and the South must produce its own food during the coming year if it is to escape the menace of famine."

Referring to that letter, the MANUFACTURERS RECORD said that it was a misstatement of facts and an insult to the South. Attention was called to the fact that while the South buys much corn and meat in the West, it nevertheless contributes very largely to the food supply of the North and the West; but Mr. Vrooman made no intimation whatever that the North and the West would not be permitted to have cars for bringing foodstuffs from the South, while he threatened that the South should not have cars to bring foodstuffs from the West.

The South ships about \$200,000,000 worth of vegetables, early fruit and similar things into the North and West annually. It ships into those sections also an enormous amount of cottonseed oil, without which many of the big industries of the West would perish. It ships into the North the entire cotton supply, without which all of the cotton mills in the East and New England would close.

The South ships 99 per cent. of all the sulphur produced in the United States, and without which all the explosive factories in the country would have to shut down.

The South produces over half of the petroleum of the United States and over a third of the world's output.

It ships a very large proportion of the coal that runs the industrial plants and heats the houses of the North and West, and without these enormous shipments of coal from the South to those sections their factories would close and their people would freeze.

The South also ships a vast amount of lumber into the North and West.

But ignoring all of these things, speaking of the South as though it was a region cut off to itself and depending upon the kindly consideration of the West to help it out in its food supply, a man holding a position as Assistant Secretary of the United States Department of Agriculture placed before the country the absolutely misleading statements made by him in his speeches and again in his letter to Mrs. Mathis about the South. The South was made by him to stand out before the nation as though it was recreant to its responsibility, as though it was dependent upon other sections and would not be fed by other sections, and many papers in the North and West, some of which have loved to have an opportunity to berate the South, denounced this section for its failure to raise foodstuffs based on Carl Vrooman's statements, while at the very time their own cities were dependent upon the South for much of the food they were consuming.

But it seems almost a waste of space even to call attention to the lack of sense and lack of judgment displayed by Mr. Vrooman, which are as conspicuous in his letter to the MANUFACTURERS RECORD as they were conspicuous in his speeches through the South as a Government official. As a Government official Mr. Vrooman is a distinct national liability.

HOW A TEXAS JUDGE WOULD HANDLE SOME UNITED STATES SENATORS.

A DISPATCH from Houston says that Judge Walter R. Burns of the United States District Court, in charging the Federal grand jury, after calling by name Senators Stone, Hardwick, Vardaman, Gronna, Gore and La Follette, said:

If I had a wish, I would wish that you men had jurisdiction to return bills of indictment against these men. They ought to be tried promptly and fairly, and I believe this court could administer the law fairly; but I have a conviction as strong as life that this country should stand them up against an adobe wall tomorrow and give them what they deserve.

This Texas judge evidently knows the best way to meet such a crisis as that which this country and the world are now facing.

THE QUEEN OF BELGIUM GIVES SOME PERSONAL EXPERIENCES.

THE official bulletin of the United States Government of October 3d contains an article entitled "Lest We Forget," by Mrs. Mary Roberts Rinehart. This bulletin is the official publication of the country and is issued by The Committee on Public Information. This particular article should be read by every man and woman in the country, and we take it for granted that copies can be had from The Committee on Public Information, Washington, by any who may desire to see it.

Mrs. Rinehart writes of her personal experiences in Belgium and gives interviews which she had with the King and Queen of Belgium. The facts in regard to barbarity, brutality and inhuman treatment of soldiers and of women merely serve to confirm what Mr. Otto H. Kahn and thousands of others have said on the subject, and Mr. Kahn, be it remembered, is himself of German birth and the head of the banking house of Kuhn, Loeb & Co. of New York.

Lack of space prevents our quoting anything from Mrs. Rinehart's elaborate article beyond a brief statement from her in regard to her interview with the Queen of Belgium, of which she said:

"I have never before broken the silence of my interview with Elizabeth, Queen of the Belgians, that small, frail and heroic woman who has lived for three years under the roar of the artillery at Dixmude and Nieuport. But the time has come to break that silence. Not all can be told, but because an infamous report has been spread broadcast that Elizabeth of Belgium sympathizes with Germany I shall tell some of the things she said. I quote from my notes of that interview:

"It is the women and children!" she cried. "It is terrible. There must be killing. That is war. But not this other thing."

"She could not understand American skepticism on this point. She had but just returned from England, where in one convent 29 Belgian nuns were encephalic by German soldiers. She had visited them."

"That to her was the most terrible thing of the war. That these quiet women, living their devout and simple lives, should have suffered so grossly, bewildered and dazed her. Was there nothing, then, sacred to these invaders, not even the church?"

"I am a Bavarian," she said. "I have always from my childhood heard this talk that Germany must grow, must get to the sea. I thought it was just talk—a pleasantry. And the lies they have told about us! The Emperor has always pretended to be so friendly, and all the time—"

"She held out her hands expressively.

"Anyone who knows the King knows that he cannot do a wrong thing. It is not possible for him. He cannot go any way but straight."

"Then she recurred to the invasion and the terrible cruelties of the German army.

"They were terrible," she said, "especially what they have done to women and children. But more than any men in the world the Germans are cruel to women. I have seen them myself when they did not know who I was—on trains, sometimes—not since the war, of course. But the very way they stare at women is odious."

"She thought that this attitude of the Germans explained many things. And she told me in detail revolting stories of the profanation of churches under the pretext, totally unfounded, that the Belgian churches were storehouses for arms. She told me, too, of the especial cruelty they had shown to priests and nuns; of locking the priests in churches and, after insulting the altar, of killing them."

"I said it was difficult to say what any army would be in an occupied country. But she protested.

"Do you think the Belgians would have done such things? Never, never. Isolated instances might be possible. But the Germans have commit-

ted thousands of crimes. I have sat in this very room while the diaries of German soldiers were read. Even if we had had no other means of knowing, those diaries would have told us everything. They relate unspeakable crimes."

AMERICA'S RELATION to the WORLD WAR

Shall Our Nation Live or Perish?

As viewed by the Editor
of the
Manufacturers Record

Published in pamphlet form, in
response to numerous requests

TEN CENTS PER COPY

"I AM A PATRIOT, BUT"—THE TIME HAS
PASSED WHEN "BUTTERS" CAN BE
COUNTED UPON.

R. E. Montgomery,
Pres. and Gen. Manager.

LEE LUMBER CO., INC.,

Lumber, Sash, Doors. Long Leaf Timbers a Specialty.

Memphis, Tenn., October 1.

Editor Manufacturers Record:

Your editorial in your issue of September 27 is in line with most others who take your attitude, all of whom set up a man of straw which requires no effort to upset.

You attribute to all who do not agree with your views, lack of patriotism, and worse—you make self-evident statements of facts not disputed, and go to great length to prove them—and to place all, however patriotic and sincerely faithful to our country and its institutions, but who cannot agree that those responsible for our involvement are all-wise, omnipotent and not subject to the human attribute of fallibility, in the ranks of traitors, and even advocate imprisonment or death to the millions who do not wholly accept your dictum.

Do you really believe that those men who are now in Washington, men drawn from the great corporations, are patriots? I can hardly believe that you do—I mean as a class. I realize that there are exceptions—as I know that some of them are there to promote the interests of their own enterprises, and could easily prove that profiteering and not patriotism is the moving sentiment of these.

You must know that all metals and their manufactures have advanced to unnatural prices, and prices which our Government should not permit, and that prices could be reduced one-half and still afford fat profits.

We are in too deep to withdraw from this conflict, and I am for success to our arms, as it would now mean disaster to fail, but I do not think that I am under patriotic duty to say that wrong is right and to forego criticism of our domestic policies, and not to demand that the very rich be made to do their share. Nothing has been done as yet to this end, though much has been proposed. I am not speaking at random, but have knowledge of facts to sustain my views.

It is not my desire or purpose to engage in a lengthy controversy, as it is my opinion that there are many millions of our people who look upon this matter exactly as I do, but who realize with me that a discussion at this time could do no good, yet they feel humiliated with me when they are classed as "unpatriotic citizens."

In talking to the employees of our concern I have always advised strict co-operation with our Government in the fight being made, believing that it is necessary to do this whether we are right or not as a nation in the fight.

I believe that writers like yourselves are paying the way for vast internal trouble in the days to come, when this great war shall be ended, and believe that a more conciliatory attitude would go much further towards creating a spirit of co-operation that would make us more united when the struggle is over, and when the

greatest wisdom of our greatest statesmen will be needed to settle the enormous problems with which we will be confronted.

R. E. MONTGOMERY.

In the foregoing letter Mr. Montgomery makes some statements wholly inaccurate. We do not advocate "imprisonment or death to the millions who do not wholly accept our view." That is simply false, and that statement should really be a sufficient answer to Mr. Montgomery's silly letter. We advocate imprisonment for pro-Germans who are antagonizing this country in this great hour of trial, and we do advocate the death penalty for out-and-out traitors who are seeking to betray this country into the hands of Germany. We are in the war, and however much a man may prate of patriotism, he is not a patriot if he does not give to the country the best and sincerest and whole-souled service. Every time any man says "I am a patriot, but," he is simply helping Germany and doing exactly what Germany would like to have Americans do. These BUTS are the final resort of people whose patriotism does not count for much.

We have not suggested that those in authority are omnipotent and all-wise. That is as inaccurate as some of the other statements by Mr. Montgomery.

Mr. Montgomery's attack on the patriotism of "men drawn from the great corporations" is an indication that he is not willing to give to others the credit for patriotism which he claims for himself.

We do not know whether Mr. Montgomery wants us to have a spirit, as suggested in the last paragraph of his letter, of "conciliation" toward the pro-Germans and those who are co-operating with pro-Germans in seeking to hamstring this country, or not. If he means that "a more conciliatory attitude" should be shown the pro-Germans or the people who apparently seem to be represented in thought by LaFollette and his crowd, then we have no desire to show any spirit of conciliation. We far prefer the open, outright antagonism of the Germans to the spirit of the men who, like Mr. Montgomery, charge lack of patriotism and selfishness to those who are giving their energies to help the Government in this great emergency, even if they have been identified with great corporations.

Will Mr. Montgomery please tell us where the great men to lead this country are to be found if they are not among its great business leaders? And where is the money to come from to carry it on if the great business institutions of the country do not to a large extent help to provide it? There is not the slightest foundation for the suggestion that the very rich are not being made to do their share, and every intelligent man knows this.

But we have not space to waste on any man who so thoroughly misrepresents the whole situation as Mr. Montgomery does. We trust, however, that his views are based on misinformation and lack of judgment rather than on any lack of the patriotism which he claims. If so, there is hope for him, but the chances look a little slim to us of a man of his views ever becoming a true American in the deepest sense in this crisis, when the BUTS cannot be counted as of much value.

IT is only the Kaiserettes among the women suffragists who oppose the Liberty Loan unless they are given the vote instantly. Why not call them by their true name, Kaiserettes?

Entitled to Justice and Fair Play.

ISAIAH J. WHITLEY, Principal Mobile County Training School, Plateau, Ala.

I wish to thank you for the article which appeared in the MANUFACTURERS RECORD August 30, entitled "The South's Responsibility to Itself and to the Negroes."

The colored man in this country is willing to bear his share of the burdens and hardships that men must go through to make a great nation. We feel that in return we are entitled to justice and fair play as citizens. I believe the whole United States will eventually recognize this as every man's birthright. And the sooner the better.

The negro race is more encouraged when we find that the white man, North and South, is willing to allow him a fair chance in the race of life.

Handling of South's Cotton Crop Facilitated by Revolutionary Changes

COTTON MANUFACTURERS AND WAR BOARD AGREE ON GREATLY INCREASED DENSITY FOR BALE AND STANDARDIZATION OF FREIGHT CARS OF ALL RAILROADS.

[Special Correspondence Manufacturers Record.]

Washington, D. C., October 6.

Two steps of an epochal nature in the future transportation and handling of the great cotton crop of the United States were taken as a result of a meeting held under the auspices of the National Association of Cotton Manufacturers at Washington on October 5.

These consisted in the passing of a resolution endorsing the baling of cotton at a density of 32 to 35 pounds to the cubic foot, and the announcement by Howard Elliott of the Railroads War Board of the Council of National Defense of the appointment of a committee by that board to consider the standardization of the freight cars of the United States.

The meeting in question was attended largely by railroad officials, compressors, warehousemen and representatives of the New Orleans, Savannah and New York cotton exchanges, and was held at the New Ebbitt Hotel. Its immediate object was the consideration of the important problem of economizing freight space, both by land and by water, in cotton shipments, in conformity to the patriotic plans now under way among all business organizations for co-operation in every measure designed to an effectual prosecution of the war.

Representatives of the interests named were present from practically every interested section of the South and East. Among those from Southern points who participated in the discussions were: Joseph Newberger of the Newberger Cotton Co., Memphis, Tenn.; Capt. J. C. Haskell, president of the Atlantic Compress Co., Atlanta, Ga.; Major Smythe, president of the Pelzer Manufacturing Co., Pelzer, S. C.; W. D. Nesbitt, president of the Warrant Warehouse Co. and of the Magnolia Compress & Warehouse Co., Birmingham, Ala.; J. H. Latham, cotton dealer and warehouseman, Greensboro, N. C.; Fuller Calloway of Lagrange, Ga., one of the largest cotton manufacturers in Georgia, and formerly State railroad commissioner, and President Clark of the New Orleans Cotton Exchange.

The meeting was characterized throughout by unity of purpose and a definite desire to co-operate with the Railroads War Board of the Council of National Defense in the conservation of freight cars through the devising of better methods of cotton shipments and a more efficient packing of the bales to achieve the end in view.

The most important outcome of the conference was the endorsement by the National Association of cotton baling up to a density of 32 to 35 pounds. This question of the density of the cotton bales has been a mooted point for many years, and one with regard to which there were doubts as to whether the manufacturers of cotton would acquiesce in approval.

The present standard of density is 22½ pounds to the cubic foot, and ship freight rates are based on that as a minimum density. The epochal change determined upon at the conference represents the first definite step forward in the methods of handling and transporting cotton in the past 40 years. Prior to 1875 the cotton was put up at the gins in loose bulk of 12 pounds to the cubic foot. Compresses were first established at the ports of shipment to reduce the bulk, and these got down at the start to 22½ pounds to the cubic foot. At that time the spinning mills and the cotton manufacturers registered opposition on the ground that damage to the fiber would ensue, but the objections were speedily overcome, as it developed that no material deterioration took place as a result of the higher density of packing.

The present situation has developed in the same way. The necessity for economizing ocean freight space, brought about by the demands of the great war and the loss of shipping by submarine depredations, called for a modification of the old-time methods, and has already brought improved machinery into use. Again, the first step was taken at the ports in the way of compressors, which reduced the bulk and increased the density of the bales from 22½ to 32 pounds, thereby increasing

the available capacity of the cargo space in the ships about 30 per cent.

One of the first questions threshed out in the meeting, naturally, was that raised by cotton mills and dealers in cotton here and elsewhere of possible damage by compression.

This question was promptly set at rest when, at the conference, the American mills, both South and East, expressed their approval of the higher density bale. Their position was not taken because the change would be an advantage to them, but because it would save space both in land and water shipments, and incidentally would greatly facilitate the transportation of the entire cotton crop.

As regards the situation as it would be affected abroad, a cablegram from the head of the Manchester spinners was received by the association in conference here, stating that they approved of the use in America of the higher density baling on the ground that there is no damage to the fiber, and that, on account of that density of package, the cost of transportation is reduced and the amount of tonnage capable of being transported under present vessel shortage is greatly increased.

In the course of the discussions on the subject, the matter of railroad freight congestion in its effects on cotton transportation was recognized as of paramount seriousness, in consequence of which any methods essential to increasing the amount of shipments within a given car space obviously became of the utmost importance. Delays in shipments meant that money would be tied up, and the greater the price of cotton the more capital would be made idle in this way. In view of this situation, it was further advocated that the Government "go easy" in any curtailment of coastwise traffic by the withdrawal of coastwise ships for the transatlantic trade. This latter apprehension was afterward removed by an announcement that ships of foreign register would be allowed to participate in coastwise trade during the period of the war and for 120 days thereafter, subject to the approval of the Shipping Board, as a result of legislation enacted to meet the situation.

Various objections to the higher density packing were advanced early in the meeting, not so much as representing the personal opinions of the speakers as presenting complaints that had been received from time to time from the mills. This feature was stressed somewhat with regard to cotton raised in the Delta sections of the cotton belt, where, it was said, conditions of moisture were such as to render intensive packing inadvisable. At this point Fred Taylor, cotton technologist of the Agricultural Department, addressed the conference and described the results of several years of investigation and experimentation in all parts of the cotton region. According to Mr. Taylor, the department's investigations showed that high density pressure was without injurious effects on the fiber, either of short cotton or of long staple up to 1¼ inches. As to the cost of changing the methods, Mr. Taylor said that it would be small, calling for an outlay of only about \$10 a press box for adjustment to the standard size.

As regards the use of the 27x54-inch boxes, Mr. Zimmerman of the Department of Commerce told the meeting that his department had called upon the ginners for a report as to the possibility of their using the boxes of the size named. The replies received show that by far the greater part of the ginners now use boxes of the uniform size, and that most of the rest will make the change at once. The manufacturers of New England were universally in favor of the higher density.

The second great feature of the meeting was reached with the appearance at the meeting of Howard Elliott, formerly president of the New Haven Railroad, and now a member of the Railroads War Board of the Council of National Defense, who put before the members the railroads' side of the movement for closer co-operation and greater efficiency in the handling and transporting of the nation's cotton crop.

In a carefully prepared statement Mr. Elliott set forth at some length the manifold activities of the railroads in their efforts to meet the conditions that had been suddenly precipitated by the great war. His figures covered the vast field of transportation under normal conditions and made plain the enormous task devolving upon the railroads by the impetus which war had imposed. While pointing out that cotton was only one of the great commodities to be handled, it was at the same time one of the most important. Success in its transportation, he declared, meant unqualified co-operation on the part of the cotton men and the arrival on their part and on that of the railroad officials at an intelligent and sympathetic understanding of all the problems involved with a view to their satisfactory solution. Reviewing the experiences of the railroads up to the present moment, Mr. Elliott was optimistic in his expressions, stating his belief that they had handled the situation with reference to cotton successfully, as well as with coal and all other supplies to be transported over land and water. He also spoke of the unqualified success that had attended the transportation of men and supplies in connection with their movement to the training camps and cantonments, as well as the part which the railroads had performed in getting materials for construction through on schedule time, so that not a single hitch in building work had been occasioned through the failure of the railroads to do their part.

But the epochal point was reached when Mr. Elliott called the attention of the meeting to the fact that the Railroads War Board had appointed a committee to standardize the freight cars of the United States to three sizes of 30-ton, 40-ton and 50-ton capacities.

This in itself, it was pointed out, constitutes a tremendous step forward in railroad economics, involving as it will immense conservation and saving in cost of equipment, repairs, use and exchange. In this connection Mr. Elliott took up the question of the standardizing of the cotton bale so as to meet the dimensions of the standardized freight cars, as is expected to be brought about through the deliberations of the special committee mentioned by him. In order to get the best results, which in the general sense of the meeting, although not arbitrarily so expressed, calls for a loading of a minimum of 100 bales to the standard freight car, there will necessarily have to be a co-ordination of the dimensions of the bale to the interior dimensions of the standard car. While no expression was given by Mr. Elliott of these prospective car dimensions, it is highly probable that the present standard gin bale of 27x54 inches, with a depth approximating 45 inches, can be best reduced by the present old-style compression machinery for better loading.

Of the various other matters taken up at the conference, and which, although secondary in importance to the two larger matters which have been described in some detail, were nevertheless vital to the cotton situation, their gist will be found succinctly set forth in the several resolutions unanimously adopted by the meeting. These resolutions were as follows:

Whereas, there exists imperative need for the division of means for the speedy, economic and uninterrupted movement of the present cotton crop; therefore, be it

Resolved, That we approve of every effort made toward putting cotton in such condition at the compresses that the same may be loaded to the maximum cubic capacity of each car. Be it further

Resolved, That, in view of a report recently made by the Federal Department of Agriculture on experiments in greater compression of various classes of cotton, we believe that cotton can be compressed to a greater density than is now customary without serious damage to the staple, and therefore recommend that cotton so compressed shall be received by all dealers and consumers.

Resolved, That a committee, made up of all the interests represented in this conference shall be appointed by the Chair to take such immediate, adequate and practical steps as may be necessary to assure speedy and uninterrupted movement of the cotton crop.

Resolved, That the Chair appoint a committee to prepare a comprehensive report on the shipping requirements for the movement of cotton and manufactures of cotton, and endeavor to secure from the Department of Commerce their recommendation that the Shipping Board assign the necessary shipping for this purpose. Be it further

Resolved, That the above committee shall investigate and devise adequate means for securing a satisfactory balance in the movement of cotton by water and rail, in order that there may not be undue congestion at any port.

Resolved, That we request the Department of Commerce to instruct its representatives in the field to work for the adoption by all ginners of a standard box 27x54.

Resolved, That we request the Department of Agriculture to address the Governors of the several cotton States, ask-

ing them, through their departments of agriculture, to work to the same end.

Resolved, That all committees appointed by the chairman of this conference be under the authority of and report to the National Council of American Cotton Manufacturers.

Resolved, That we, representatives of the shippers of cotton, cotton merchants and manufacturers, the compresses and warehouses employed in the compressing and storing of cotton, and the railway and steamship companies engaged in its transportation, in conference assembled, express our gratification at the passage by the Senate of House Bill 6175, authorizing suspension, for the period of the war and for 120 days thereafter, of the provision in the navigation laws forbidding the employment of vessels of foreign registry in the coastwise trade; and be it further

Resolved, That copies of this resolution be sent to the President and to the presiding officers of the House of Representatives and Senate.

A Southern Chemical Company to Build Plant North for Making Sulphuric Acid from Sulphur.

Louisville, Ky., October 8.—[Special.]—The Federal Chemical Co. of Louisville, large manufacturers of commercial fertilizers, with plant at Louisville, Nashville, Mt. Pleasant, Tenn., and other points, has announced that the company will shortly erect a large sulphuric acid plant at Columbus, Ohio, adjoining the present mixing plant, which was started last spring and just completed at a cost of \$200,000. The new plant will cost in the neighborhood of \$300,000, and it is expected that the lead for the condensing chambers alone will cost close to \$100,000.

Wood Crady, sales manager of the big Louisville company, which has offices in the Lincoln Savings Bank Building, reports that Peter Gilchrist, an architect of Charlotte, N. C., will draw the plans, and that the plant will have a daily capacity of 100 tons of sulphuric acid, made by the sulphur-burning process. About half of this quantity of acid will be used in the company's mixing plants at Louisville, Columbus and other points, while the balance will be sold for munition manufacturing, etc. Work on this new plant will be started as soon as the plans can be completed.

The company at its West Nashville (Tenn.) plant is using sulphur-burning machinery manufactured by the Glen Falls Machine Works of Glen Falls, N. Y., and is planning to use the same equipment in the new plant. With the execution of the lead and sulphur-burning equipment, not much machinery will be required, as what little power is needed will be supplied by the company's adjoining plant.

This new plant will be of frame and concrete construction throughout. Mr. Crady stated that all contracts for equipment would be placed through the Louisville office.

FAILS TO TRICK DR. HILLIS.

Forged Message Sent to Preacher to Keep Him from Detroit Loan Rally.

[Special Telegram to Public Ledger, Philadelphia.]

Detroit, October 8.—German propaganda in Detroit is blamed for an attempt to prevent or hamper the big mass-meeting in the Armory tonight, marking the opening day of the Liberty Loan campaign.

Dr. Newell Dwight Hillis of Brooklyn, en route to Detroit for the meeting, received a false message stating that the meeting had been postponed. The message had the forged signature of a member of the local loan committee. Doubting the authenticity of the message, Dr. Hillis telephoned for more information. He was informed Detroit was solidly behind the Liberty Loan, and his services were urgently needed.

To Make Potash in Cuba.

C. E. TAYLOR, Chucho Guerra, Prov-de-Matanzas, Cuba.

By everlastingly sticking to it, I have in course of construction the first potash plant to be operated in Cuba for the production of this product—a vegetable product produced from the Palma de Cano tree, that is in such abundance in this island.

Dr. O'Gara on Sulphur in Agriculture

By P. J. O'GARA, Director Department of Agricultural and Smelter By-Products Investigations, American Smelting & Refining Co., Salt Lake City, Utah.

After reading the article entitled "Sulphur Fertilization for Cotton," by Mr. Courtenay De Kalb, I feel that it would be an unnecessary repetition on my part to discuss the technical aspects of the matter which have been so clearly set forth in this article. I shall, therefore, confine myself to certain matters of interest, both from the historical point of view as well as from the experiments which have been conducted near Salt Lake City, Utah, on the experimental farm of the American Smelting & Refining Co.

Those who know anything at all about the use of sulphur in agriculture are undoubtedly acquainted with the work of Lawes and Gilbert on the Rothamsted Estates, Harpenden, England. Sir John Bennett Lawes began his experiments about 80 years ago. Five years after his fertilizer experiments began he patented a manure formed by treating phosphates with sulphuric acid, and thus initiated the artificial manure industry. Shortly thereafter he associated with himself Sir J. H. Gilbert, with whom he carried for more than half a century those experiments in raising crops and feeding animals which have made the Rothamsted experimental farms known to scientific men all over the world.

Strange enough, as I write this I have before me, just received, a request from Dr. E. J. Russel, director of the Rothamsted experimental station, dated August 3, 1917, asking for information on certain experiments that are being made on the experimental farm of the American Smelting & Refining Co., with particular reference to sulphur. This indicates the tremendous interest that is being taken by agriculturists in the matter of the use of sulphur in agriculture. It will be well to note that Lawes, in his experiments with phosphates, was seeking to make them available as plant food, but he undoubtedly did not realize that the free sulphuric acid had quite as beneficial an effect upon the soil and the resultant crop as did the available phosphates.

As a matter of fact, it has only been within recent years that sulphur has been looked upon by the scientific agriculturists as an important plant food. It has been only within very recent years that we have learned of the beneficial effects of sulphur upon the soils in its relation not only to the chemical and bio-chemical reactions which take place as a result of its presence, but also the very important physical effects, particularly in our heavy alkaline soils. What these relations are has been ably discussed by Dr. De Kalb in his article on "Sulphur Fertilization for Cotton."

My own observations on the effects of sulphur on crop yield date back about eight years. The discovery of this effect was purely accidental. I was at that time interested in the production of intercrops in young pear and apple orchards in Southern Oregon. These intercrops consisted of the various cereals, legumes and other crops commonly grown for forage. The crops were planted between the rows of young orchard fruit trees, and they paid at least a part of the cost of maintaining the orchard until it was capable of bearing a commercial crop of fruit. In order to prevent the attacks of certain injurious insects and fungi, the trees were sprayed with the well-known lime-sulphur (calcium polysulphide) preparation and the self-boiled lime-sulphur. This latter spray mixture consists almost entirely of a mechanical mixture of finely divided lime and sulphur, there being formed in the mixing of the sulphur with the slacking lime but very little polysulphide. In spraying, a considerable amount of the material naturally fell upon the ground about the trees, and, of course, all that which adhered to the trees finally reached the soil.

It was noted that the plants growing within a certain radius about the tree were better than the remainder of the plants. In fact, in many cases the contrast was so striking that it could not help but bring comment from the average observer. It was first supposed that the increased growth of the crops was due to lime, but analyses of the soils indicated that the lime content was very high, higher, in many cases, than necessary for the production of general agricultural crops. Some analyses even indicated that the great abundance of lime had caused calcareous chlorosis of the trees, e. g., a yellowing or whitening of the foliage. When it was

shown that the lime content of the soil was much above that necessary for good agricultural purposes, the only conclusion that was left was that the stimulating effect was due to sulphur.

Similar observations made by Mr. F. C. Reimer of the Southern Oregon Experiment Station, followed by experimental work on the treatment of soils with elemental sulphur and with certain sulphur compounds, demonstrated beyond a doubt that sulphur, and not lime, was responsible for the abnormal increase in plant growth which had been observed in the orchard intercrops.

My work in Utah dates back about four years. Naturally, one of the most absorbing problems at that time was to determine the effects of sulphur dioxide on plants, since most of the sulphur from smelting plants is thrown out in the form of sulphur dioxide. Out of our experiments, which were planned for the purpose of noting the direct effect of the sulphur dioxide upon plants, as well as to determine the relative susceptibility of the various crops to sulphur dioxide under known conditions, came some very striking results. The most notable of these was that when the concentration of sulphur dioxide is just below the point of causing visible markings, or bleachings, on the foliage, beneficial effects are produced, both by direct absorption by the growing plant itself and by absorption by the soil in which the plant is growing. With extremely low concentrations—not more than an average of one part of sulphur dioxide per million parts of air—administered for one-half hour each day from the time the plants appeared above the ground up to the time that they were harvested, it was found that not only was there no injury, but a decided beneficial effect, this effect being noted first in an increase in the protein content and second in a decided increase in the total amount of vegetable matter produced as compared with checks grown under similar conditions but to which sulphur dioxide was not applied. With wheat the increase in vegetable matter was about 5 per cent., while the protein increase was about 1 per cent. Similar results have been obtained with alfalfa, carrots, parsnips, etc.

These crops were not under glass or in pots, but were grown under normal field conditions with a sufficient number of plots and plants so that experimental error and error due to variations in individual plants was reduced to a minimum. The experiments were in no wise of the laboratory type.

Coincident with the sulphur dioxide experiments we have carried on experiments with sulphur and sulphuric acid added as such to the soil. The results secured in 1916 have already been reported.* The results for 1917 will not be available until later, when all of the crops have been harvested, but even at this time some very interesting data are at hand. In 1916 the percentage gain for alfalfa was 36.8 per cent. with the sulphur treatment and 8.5 per cent. with the sulphuric acid treatment. In 1917 the same plots (first crop) showed a gain of 266 per cent. with the sulphur treatment and 200 per cent. with the sulphuric acid treatment, as compared with the check plots. In 1916 sulphur was added to the soil of the sulphur-treated plot at the rate of 400 pounds per acre; 46 degrees Beaume sulphuric acid was added to the soil of the sulphuric acid-treated plot at the rate of 2172 pounds per acre, this acid having a sulphur equivalent of 400 pounds of sulphur per acre. No sulphur or sulphuric acid was added to the plots in 1917. Therefore, the greater gain over the check plots in 1917, as compared with 1916, is entirely due to the 1916 treatment, which shows a wonderful residual effect.

Our studies show that one of the striking effects of sulphur and sulphuric acid treatment of soils on the soil micro-organisms is the decided and consistent increase in total bacteria as determined by the plate method. Under certain conditions in a period of three weeks the sulphur and sulphuric acid-treated plots showed 50 per cent. more micro-organisms than did the untreated checks. The sulphur plots in general showed a greater increase in the number of organisms than

*"American Smelting & Refining Co.'s Tests with Sulphur and Sulphuric Acid on Soils." By P. J. O'Gara, Mining and Scientific Press, June 16, 1917.

The Nitrate Plant Goes to Muscle Shoals, Ala.

IF ADEQUATE SITE AT SATISFACTORY PRICES AVAILABLE.

[Special Correspondence Manufacturers Record.]

Washington, D. C., October 8.

The \$3,000,000 Government nitrate plant will be located at Muscle Shoals.

Authority for this statement is contained in a telegram, signed jointly by Senators Underwood and Bankhead, sent to J. H. Worthington, Sheffield, Ala., on October 3. The telegram reads as follows:

"The Secretary of War has authorized us to state that if a satisfactory site at a reasonable price for lands can be secured, the experimental nitrate plant is to be located at Muscle Shoals."

Confirmation of the statement contained in the telegram, which has been published in several Southern papers, was given today by Senator Underwood.

No official substantiation of the intention to erect the plant at Muscle Shoals could be obtained from General Crozier, chief of the Bureau of Ordnance, or from the Nitrate Division of the Ordnance Office. So far as these natural sources of information were concerned, it appears from their statements that no official notification has passed through their hands.

It is quite evident, however, that the approval given by Secretary of War Baker to the Alabama Senators may be taken as representing the definite conclusion arrived at, dependent upon the conditions named in the telegram, none of which is to be expected to interpose insuperable obstacles.

Inquiry at the Nitrate Division of the Ordnance Office today divulged the fact that the original restrictions of the site to "somewhere in Southwest Virginia" had been removed some time since. But not even this enlargement of available territory for the plant had been made the subject of an official announcement. It was rather in the nature of a return to the earlier considerations of the entire range of territory in which the plant might be satisfactorily located without violating any of the outstanding conditions contemplated in the act authorizing its erection.

Another interesting point in the final selection of Muscle Shoals for the experimental plant is the indication afforded that the whole of the \$20,000,000 appropriated for the Government manufacture of nitrates will ultimately be expended. As will be recalled, it was at the recommendation of a special committee, approved by the Secretary of War, that it was determined to expend only \$3,000,000 for the main experimental plant, with smaller allotments to be utilized for experimentation in other processes. The announcement made at that time was to the effect that the combination process to be employed in the production of synthetic ammonia with the size of plant contemplated would not require the utilization of an immense amount of water-power.

This phase of the situation, apparently, has not changed. In response to an inquiry on this point, Capt. A. H. White of the Nitrate Division of the Ordnance Office, said today:

"In the event that the plant to be built in accordance with the process of the General Chemical Co. should be located near Sheffield, Ala., with regard to which we have received no definite information, it would not necessarily involve the development of water-power at Muscle Shoals, since the plant which is at present contemplated requires only about 4000 horse-power to produce 30 tons of ammonia per day and oxide this to nitric acid.

"The appropriation for the construction of the ammonia plant is \$3,000,000, and the appropriation to be used in building a plant for the oxidation of ammonia to nitric acid and the concentration of the nitric acid of a capacity equivalent to 12 tons of 100 per cent. acid in a 24-hour day is \$600,000."

This statement becomes significant in connection with the latest turn in events, leading, as it does, to the logical assumption that the selection of Muscle Shoals has in view the expenditure eventually of the entire appropriation of \$20,000,000 and the ultimate development of the immense water-power there available before the Government enterprise is concluded.

However, there are other features worthy of consideration at this stage, even though the prospect of

water-power development on a grand scale at Muscle Shoals may not be fully justified by the situation as it now stands. The report of the Nitrate Supply Committee on May 11, 1917, indicates that not only the \$3,000,000 and the \$600,000 plants are to be located together, but that the proposed new powder plant of the Government is to be located in the same neighborhood. This plan, it was learned today, has not undergone any change.

Beyond this point it is to be remembered that the functions of the Government enterprise involved have in view the manufacture of fertilizers almost, if not quite, as fully as that of material to be used directly for war purposes. Hence, there is to be kept in mind the two large interests involved. As a general proposition, the plants are required to be located west of the Appalachians, as a matter of protection against invasion. Under this consideration alone the available area extends roughly from Roanoke, Va., to Birmingham, Ala. But the main munitions plants of the country are found along the Delaware River, while the great fertilizer demands come from North Carolina, South Carolina, Georgia and Alabama, which absorb by far the greater proportion of the bulk of fertilizers used by the nation.

All of these considerations, taken together, strengthen the conclusion that there will be no further change in the plans for the Government plants, and point to the site last determined upon as the one best suited for permanent location, as well as for final development to the full measure of the original appropriation of \$20,000,000. It is quite probable, also, that the continued absence of a definite official statement from the Bureau of Ordnance is based on the fact that questions of the exact site and the purchase of the land have not yet been settled. This, naturally, will serve to frustrate any attempt that might be made toward speculation in available sites with a view to enhancing prices. The expectation is that a formal official announcement will be made as soon as these minor details have been satisfactorily adjusted.

WILSON & CO. PACKING ACTIVITIES.

Plans for Big Killing Capacities at Mobile and New Orleans.

Wilson & Co. of Chicago have contracted with the A. D. Davis Packing Co. of Mobile, Ala., for killing between 5000 and 6000 head of cattle each month in the new Davis plant recently completed.

From 600 to 1500 head of cattle for killing will be shipped each week from Argentina to Mobile in several steamships which Wilson & Co. will place in service between Mobile and the Argentine Republic, besides buying hundreds of native cattle. In addition to filling its Wilson contract, the A. D. Davis Packing Co. will kill 50 cattle, besides hogs and sheep, for its own account. The cattle pens at the Davis plant are now being enlarged to provide for handling 5000 head of stock, and further additions are planned.

It is stated that Wilson & Co. are contemplating an expenditure of \$2,000,000 to provide facilities for killing and packing meat at New Orleans. The corporation has options on two advantageous sites located on the Mississippi River, where it proposes to establish a plant, including extensive cold-storage facilities and shipping conveniences. It has submitted a killing proposition to the New Orleans Co-operative Butchers' Abattoir Association, whereby this organization will slaughter from 6000 to 7000 head of cattle each month for the Wilson plant. It is understood that this proposition will probably be accepted.

The Canadian Government has fixed prices for 1917 wheat crop at \$2.15 to \$2.21 per bushel at Lake Superior terminals.

did the sulphuric-acid-treated soils, though the latter were not very far behind. It is interesting to note here that in general the sulphur-treated plots showed a greater increase in total vegetable matter produced than did the sulphuric-acid-treated plots as compared with the checks. This relation between the sulphur and sulphuric acid holds true for most of the biological effects of the treatment, and is probably due to the slower but more prolonged effect of the sulphur due to its very gradual oxidation to sulphuric acid. The plots of 1916 show the same relative increase in soil bacteria as in 1917, e. g., soils treated with sulphur and sulphuric acid in 1916 still show the decidedly beneficial effects of the previous year's treatment and compare favorably with the plots treated in 1917.

Ammonification results show the favorable influence of sulphur and sulphuric-acid treatment of soils, although the net amount of ammonia found after incubation and after the addition of ammonifiable substances is less in the treated soils than in the check plots. This is to be explained by the fact that nitrification is stimulated and the ammonia, though formed in greater quantity, is converted to nitrate more readily. Our data on nitrification and nitrogen fixation are not yet complete. Some of this work is still under way, and nothing will be published until it is sufficiently complete to warrant making definite statements.

The results so far obtained lead to the general conclusion that sulphur and sulphuric acid have a decidedly beneficial effect upon the soil flora. However, it must be borne in mind that we have been working on alkaline soils, some of them heavily alkaline. Soils, to be favorable to soil bacteria, must be alkaline. If treatment of a soil should tend to make it acid it should be limed in order to prevent the detrimental effect of soil acidity on the organisms as well as on the crop. But in the strongly alkaline soils of the Salt Lake Valley the decrease in the alkalinity of the soil brings the reaction nearer the optimum for the development of soil micro-organisms.

Summing up the whole matter, it may be said that we have no doubt as to the accuracy of the results that we have obtained. Our experiments, although reaching over a period of but four years, have shown consistent results. Much more time, however, will be necessary to bring our work to the point where we are able to make more definite statements as to the effects of sulphur and sulphuric acid under conditions more variable than we have been able to produce on our experimental farm near Salt Lake City, Utah.

"The Whole World Facing New Problems."

"Cinchfield Route"

CAROLINA, CLINCHFIELD & OHIO RAILWAY.

New York, October 8.

Editor Manufacturers Record:

I go as far as you and I think as far as anyone else in my appreciation of the importance of the Chemical Exposition in New York and other similar expositions.

We have now little more than passed the threshold of the period which in the future is to be known as the epoch in which the chemist and chemical engineer took the leading part in the development of our country.

The whole world is facing new problems. Wastes must be avoided, greater efficiencies accomplished, new raw material resources discovered and new methods of utilizing them devised. The degree of accomplishment along these lines will mark and limit the progress of industrial development in the world during the next generation.

In this work the chemist and chemical engineer must lead. They carry the burden, and the utmost depends on them. It is because such expositions bring them and their work to the realization of the people that I attach to such expositions the greatest possible importance. I am very glad, of course, that the character of the Clinchfield representation impressed you as being agreeable and efficient. I am very proud of our boys.

MARK W. POTTER, President.

Gasoline of inferior quality now sells for 80 cents per gallon in England.

The War and the Germans as Viewed by Our Readers

[The Manufacturers Record owes an apology to its readers for publishing many letters of commendation in regard to its work in behalf of this country and of civilization. There could be no excuse for the publication of these strong commendations or tributes to the Manufacturers Record if it were not for the fact that we are giving them to our readers merely to help to broaden the nation's interest in these great questions. We are not publishing them from any sense of pride or egotism, or the desire to make public such whole-souled commendations as have been coming to this paper, for we realize too profoundly the seriousness of this hour to care for such things, but we are publishing them wholly for the purpose of letting others see how the spirit of patriotism is being awakened throughout the land and the need that yet is before us for welding into one homogeneous power all of the great resources in men and money and materials of this nation for its own salvation from eternal death under German domination.]

This is our excuse for the letters which from week to week we are giving.—Editor Manufacturers Record.]

A Man Who Has Given Up Home and Business for War and Rejoices in It Because It Is Right.

H. F. COOMBS, Engineering Department T. C. Thompson & Bros., Charlotte, N. C.

Enclosed find 10 cents for copy of "America's Relation to the World War."

Your editorials are all read with pleasure, as they are based upon good sound principles and common sense. The country needs editors and editorials like yours to wake them up, for there are many people who have brains but lack good horse sense; many people fail to know from what sources they secure their health, happiness and wealth; many presume it is from their own greatness and that their fellow-men and environment have nothing to do with it; but from this war we will all learn that we are our brother's keeper.

This war has cost me my business and home, but we all must bear our share, and I know we are doing right.

The Kind of Patriotism It Takes to Win.

H. B. WOOD, President the Standard Lumber Co., Birmingham, Ala.

Permit me to most heartily congratulate you on the pamphlet "America's Relation to the World War." That's the kind of patriotism it takes to win.

I desire also to express my cordial approval of your suggestion that Mr. Roosevelt be commissioned by President Wilson to head a "Department of Safety." I am not an admirer of Mr. Roosevelt; on the contrary, I have frequently been a rather severe critic; but this is one job for which I feel he is peculiarly qualified. His energy, intelligence and patriotism are unquestioned, and this work, it seems to me, should appeal to him because it is a man-size undertaking.

Keep up your splendid work in the MANUFACTURERS RECORD! It is worth both in offensive and defensive results a goodly-sized army on the battlefield.

Utter Subjugation of Germany Only Guarantee of Civilization.

A. W. NEWETT, Cashier Bank of Groveland, Groveland, Florida.

Herewith I hand you my check for subscription, with many good wishes for the continued prosperity of your publication. I also enclose \$1 for 10 of your pamphlets, "America's Relation to the World War," and I will guarantee that they get distribution where they are most needed.

Just a few words to let you know what I think of your paper and to call attention to some evils it seems this country must stop if we are to be successful in this world war.

Your articles on America's part in this war ring true every time, and may you never lag in your faithful depiction of this country's needs!

To my mind, there are several necessary things to be done by Congress at once, and they are:

First—Suppress and prohibit from the mails every paper printed in the German language.

Second—Prohibit the teaching of German in any of our public schools or other kind of schools. Encourage the teaching of Spanish to better equip the American for the future trade with South and Central American countries.

Third—Indict such men as Mayor Thompson of Chicago, Senator Tom Hardwick and Tom Watson of Georgia, Senators La Follette, Gronna, Vardaman, and any other man in public life who makes dangerous and

sedition utterances. Indict these men by Federal Grand Jury. Who is going to pay for the utterances of these men, except the youth and manhood of our country, thrown away simply because we true Americans did not have the manhood to stand for our rights and prohibit these politicians who seek only their own selfish gain at the hands of the German vote?

Let every American business man, no matter how busy he is, write his Congressman where he stands on America's part in this war. The pro-German, the anarchist, the socialist and the pacifist does not fail to keep after the Congressman, but the American business man, as usual, says he is too busy. The consequence is that the Congressmen believe that a majority are against the war, but let them mingle with the people, and they will find that 90 per cent. of Americans are backing this war to a finish.

Fourth—Let America consider no peace until Germany and her unspeakable Turkish allies are forever subdued, so that our children may not have this job to do over again. I fear our President makes a mistake in thinking we are only fighting Germany's rulers. We are fighting every German man. If not, why is it that every German, almost, you meet will not run down the Kaiser? They won't do it. I have tried to get them to admit their system is wrong, but not one has yet admitted to me that the Kaiser is wrong.

One other suggestion, and that is that the Council of National Defense appoint one man in every community as a speaker to go before his local people with a speech of education to the masses, as to the causes of America's entry into the war, the terrible wrong-doings of the Germans, both in this country and abroad, and further, the individual conduct of each American citizen toward bringing this war to an end with the desired result accomplished, viz., the conquering of Germany and her Allies. Let us start a campaign of education along these lines, so that our citizens may know just what is demanded of them.

[The foregoing letter from Cashier Newett of the Bank of Groveland, Groveland, Fla., is worthy of thoughtful consideration. Mr. Newett makes some suggestions which, in the main, should be adopted.]

Every German language paper in the United States should be suppressed and every German language pamphlet or circular should be prohibited the use of the mails.

His second suggestion that the teaching of German in public schools should be discontinued we believe is entirely correct. We believe it is necessary to make everything connected with Germany, and the very language itself, a hissing and a by-word until Germany comes back penitent and on its knees seeks the world's forgiveness.

We fully agree with Mr. Newett that some way ought to be found to bring to punishment many of the men who in public life are doing all in their power to mislead the country, and in doing so are dooming to death many thousands of American soldiers who might otherwise be saved.

Congressmen should hear from their constituents. The pro-Germans in this country have bombarded Congress with letters and telegrams and pamphlets without end; they have worked on them personally; they have done all in their power to discourage Congressmen from standing up for America, and so it behooves Americans to let Congress know where the real people in this country stand.

With Mr. Newett's statement that America should not consider any peace until Germany and her Turkish ally are completely subdued, we fully agree. We believe that any peace short of one based on the unconditional surrender of Germany, and any peace which is not based on the severest punishment which can be meted out to the Kaiser and the military rulers of Germany,

and which at the same time can be extended vigorously to the German people themselves, would be an invitation to future crimes. We must come to our senses and understand that we are fighting the German people, and not merely Kaiserism, or at least the German people are fighting us with all of their power. They are responsible for the crimes that are being committed, and not merely the Kaiser. They should be made to pay the penalty, and if we do not enforce the penalty in a manner commensurate with the unspeakable crimes committed and the awful suffering entailed, we will be false to civilization and recreants and cowards unworthy to stand before the world as fighting for civilization.

Mr. Newett's statement that almost every German we meet will not only not denounce the Kaiser, but will not even admit that the Kaiser is wrong, is proof of the fact that the Germans in this country, as well as the Germans in Germany, are upholding Kaiserism in all its villainy. This is directly in line with the statement in the MANUFACTURERS RECORD last week, in which we pointed out that there are several million Germans and people of German descent in the United States who are not under the domination of the war lords of Germany, but who are just as bitter and vindictive against this country and the Allies as are the people in Germany, and, therefore, we can easily understand that the fight which the Germans are making is not due to their domination by the war lords of Germany, but is due to their own inherent character, which is upholding Germany's military power, which is supporting all of its fearful crimes, and which has simply reverted to the old days of a thousand years ago, when the Huns at their banquet board drank from the skulls of their captives, and those slain in battle. Fearful as it is, we are compelled to recognize that the Hun element has come to the front and that we are not dealing with a civilized people as we had counted the Germans to be, but with a people whose barbarism now dominates them as they seek to dominate the world. The utter subjugation of such a country is the only possible salvation for the world's civilization.—Editor MANUFACTURERS RECORD.]

Thoroughly Alive to the Nation's Peril.

A. D. HANKS, Port Barre Moss Factory, Port Barre, Louisiana.

Enclosed find check for one year's subscription to your paper, which is the most valuable addition we have made to our office literature this year.

I wish it were possible to convey to you our appreciation of the tremendous efforts you have made to awaken in every reader's breast the latent forces of manhood and the sublimest spiritual forces of patriotism and democracy, in the broadest sense embraced within these terms.

May the God of our fathers bless you for the unfaltering and fearless campaign you are waging against the malignant forces of pro-Germanism within our gates!

No other paper or journal we have read contains such convincing arguments in favor of President Wilson's attitude toward Prussianism. Nowhere else have Germany's horrible offenses against humanity and civilization been so exposed to the gaze of thoughtful people.

The present purpose of our lives should be to knit together every strand of our national fabric and to unite all of the scattered forces of our people. You are doing more than your part in the premises, and the day will come when the appreciation of a grateful American public will be heaped upon you in a flood tide of magnificent bounty.

Do not rest in your condemnations of the La Follettes and Von Bernstorffs, who parade the highways of our land clothed in the habiliments of American decency,

but within whose bosoms ferment the rotten impulses of the traitor's heart.

May they all be condemned, and may they all suffer the fate which is meet for their kind! Let the destruction of their cancerous growth on the bosom of Liberty be quite as complete as that to which we hope the legions of hate will be subjected under the irresistible pounding of the heavy artillery on the Western front.

Again, and yet again, here is a pledge to you and your high purposes from a plain American citizen who thanks you for the inspiration of your noble efforts to defend this land of ours from the contaminating touch of the vilest foe whom we have ever faced.

A Great Speech, Worthy of Immortality.

CHAS. W. HOWARD, Chattanooga Industrial Board, Chattanooga, Tenn.

I want very heartily to thank you for giving your readers an opportunity of reading Mr. Otto H. Kahn's Harrisburg speech.

This is the second speech made on Pennsylvania soil that should live as long as the English language.

"He who shirks his full measure of his duty and allegiance in that noblest of causes, be he German-American, Irish-American or any other hyphenated American, be he I. W. W. or Socialist or whatever the appellation, does not deserve to stand amongst Americans, or indeed amongst free men anywhere. He who secretly or overtly tries to thwart the declared will and aim of the nation in this holy war is a traitor, and a traitor's fate should be his."

It took heart, head and nerve to make that speech, just as it did that other great speech made on the bloody battlefield of Gettysburg.

Sowing Seeds of Patriotism.

MANFRED CALL, Manager the Call-Watt Company, Richmond, Va.

For two or three weeks I have been having a list of addresses carefully prepared, and now enclose 100 names, with a check for \$10, for which please send copy of "America's Relation to the World War" to each address.

I feel that I am "doing my bit" in getting your most admirable pamphlet into the hands of a few where it will be productive of good results, confirming the opinions of those who realize to some extent what we are up against, and converting the doubtful ones, if any there are in the list, to the truth.

Keep up the good work.

"Hew to the line, let the chips fall where they may."

Anything to Beat the Murdering Huns!

W. FRED LESLIE, Ex-British Soldier, Pittsburgh, Pa.

I have read from time to time all the ringing words of your editorials, and endorsed them on every possible occasion, where my limited sphere has enabled me to do so, as a further endeavor to "do my bit" in my humble way, in addition to subscribing to both Liberty loans and the Red Cross. I enclose \$1 for 10 copies of the pamphlet, "America's Relation to the World War," for distribution where it will do the most good. My age, 75, precludes my going to the front, or I would have been there in 1914.

Yours in the war for civilization and anything to beat the murdering Huns!

The Public Too Ignorant of Real Issues Involved.

W. I. HARGIS, Secretary-Treasurer Grayum Drug Co., Snyder, Tex.

Attached herewith find check for \$1, for which please send to me 10 copies of your pamphlet, "America's Relation to the World War." If it is in line with your very able editorials in recent issues of the MANUFACTURERS RECORD it is all right. The public is too ignorant of the real issues involved, and only by such means can it be made to realize the actual conditions.

Should Be in Hands of Every American Citizen

L. P. DE BOSE, Sales Manager Lamb-Fish Lumber Co., Charleston, Miss.

I enclose herewith 20 cents in stamps, and will ask that you kindly send me two copies of "America's Relation to the World War."

I cannot help but take this opportunity of expressing to you my admiration of the manner in which your paper is placing before its readers the vital importance of full prosecution of the war and the very good reasons therefor. It is indeed to be regretted that the MANUFACTURERS RECORD cannot be placed in the hands of each and every American citizen.

Awakening the Nation to Its Great Responsibility.

WILLIAMS BROS., Murfreesboro, Tenn.

We wish to take this opportunity to say that as subscribers to your paper we appreciate it more than any periodical that we know of, and we cannot too heartily commend you for the telling blows you have delivered for "preparedness" and for the awakening of this nation of ours to its great responsibility.

A Reader But Not a Subscriber.

DR. E. M. MURPHY, Macon, Miss.

Enclosed find 10 cents in stamps, for which please send me your pamphlet "America's Relation to the World War."

I frequently get your publication from the editor of our local paper, and wish to say that I see no writings that I enjoy reading more than your very strong, virile editorials.

Not Healthy Place for Pro-German Americans.

A. V. ALLAIN, Jeanerette, La.

Have been enjoying your editorials in MANUFACTURERS RECORD, and would like to say that out our way we have been blessed with few of your pro-German Americans, and well we have, for I guess your suggestions in editorials would have been carried out and there would have been fewer of these hyphenated Americans.

Your "America's Relation to the World War" is certainly very good.

A Good Live Document.

C. ROBT. CHURCHILL, President and General Manager Electric Appliance Co., New Orleans, La.

I am enclosing herewith a check for \$2, and would appreciate it very much if you would send us 20 copies of your pamphlet "America's Relation to the World War." This is a good live document, and I want to see that it gets into the hands of each of my principal employes.

The Nation's True Situation.

ROGER MOORE SONS COMPANY, Wilmington, N. C.

We congratulate you for the service you are rendering the Government and the public in bringing before the public the real conditions that confront the nation. Your efforts are appreciated by the thinking people.

A Pleasure to Subscribe.

R. A. FONTAINE, Roanoke, Va.

It is a pleasure for me to send you a check for subscription. If every magazine and paper in the United States would fight this war with the power and energy of the MANUFACTURERS RECORD, I would want them all.

The amalgamation of the entire British explosives industry is said to be under way, to better cope with competition in the marketing of chemicals after the war.

CONTRACTS FOR \$2,000,000 PLANT.

West Virginia Traction Co.'s New Electric Turbine Station.

All contracts have been awarded for the \$2,000,000 electric turbine plant which the Monongahela Valley Traction Co., Fairmont, W. Va., is building. This generating station is located five miles north of Fairmont, on the Monongahela River. The power-house construction, by the company's force, includes 150x115-foot boiler-room, 175x50-foot turbine room and 175x25-foot switchroom, all of concrete, brick and steel construction. The transmission system is to connect Fairmont, Clarksburg and vicinity. It will be 30 miles long, supplying electricity for light and power to coal-mining plants.

The initial installation will be for 20,000 kilowatts, and the ultimate capacity will be 75,000 to 100,000 kilowatts. Contracts awarded include these: Boilers, Babcock & Wilcox Company of New York; stokers, American Engineering Co. of Philadelphia; turbines, General Electric Co. of Schenectady, N. Y.; condensers, Alberger Pump & Condenser Co. of New York; switchboard and transformers, Westinghouse Electric & Manufacturing Co. of Pittsburgh, Pa. Sanderson & Porter of New York are the engineers, and A. C. Polk of Fairmont is the resident engineer.

Abounding Prosperity Comes to Farmers of Mississippi.

Jackson, Miss., October 6.—[Special.]—Prices that recall Civil War days are being paid for cotton in Mississippi, and the State is enjoying one of the most prosperous seasons in its history. The full tide of business will begin about November 1, and is expected to continue through the winter.

Delta cotton has brought 53 cents in the open market, and many farmers are holding for higher prices. They believe they will get at least 60 cents a pound, and as seed are bringing from \$55 a ton up, this will run the value of a bale well past \$300.

Tenant farmers who have not paid their rent for five years not only are paying out this fall, but find themselves with a surplus.

Much cotton is being held, because this year's crop is a "money crop." Very few farmers in the entire State failed to produce sufficient feedstuffs for their animals, and many are selling corn, soy beans, velvet beans, hay and sorghum at top prices. The livestock movement this fall is vastly greater than it has ever been, many counties shipping from one to five carloads of hogs and cattle every week.

Mississippi's efforts to do its bit for the nation is proving the most profitable piece of patriotism it ever attempted.

How One Southern Bank Turned an Entire Section Toward Stock-Raising.

Jackson, Miss., October 6.—[Special.]—How a bank has developed one entire section of Mississippi into a livestock farming country when a few years ago blooded stock were unknown is being related as one of the most interesting chapters in the history of the new development of Mississippi.

The Bank of Granada, of which J. T. Thomas is president, has 12 branches in nearby counties; so when Mr. Thomas decided to start pig and calf and chicken clubs as a means of increasing prosperity of his section he had each of the branch banks follow the scheme laid down by the central organization.

The bank bought fine stock and placed it in the hands of the boys and girls of North Mississippi. At present sufficient progress has been made by the youngsters to get together one of the handsomest exhibits ever shown on the Southern fair circuit. It is shown as the Granada Bank exhibit.

With a comparatively small investment this bank has given every worthy boy and girl in its territory a chance to own good stock, to make money and to learn thrift. Banks in Mississippi generally have been friendly toward modern agricultural development, but the success of the Granada institution has become a conspicuous example of what can be done by a forward-thinking bank president.

Concentrating on Motor Truck Production

REMARKABLE CHANGES BEING WROUGHT BY CO-OPERATION AMONG MANUFACTURERS.

[Special Correspondence Manufacturers Record.]

Washington, D. C., September 29.

The internal-combustion engine has unquestionably become the real mechanical key to success in the war, so inevitably that when the history of the conflict is written it may justly be called the "War of the Gas Engine."

Secretary Baker's recent announcement of the triumph of the new standardized "Liberty Motor" was a dramatic story, but the accomplishment was only an incident in the rapid development of the internal-combustion motor for war purposes. Essential as high-powered motors are for aviation, they are equally vital to other forms of transportation, whether on land or sea. The Secretary of War recently remarked that this was a war of transportation, and in a contest which hinges on competition of this sort the United States is bound eventually to conquer.

The real essence of the situation is that in entering the lists in a transportation struggle the United States Government is able to draw on the resources of the American automobile industry, without exception the most highly organized industry in the world. Not only in manufacturing, but in engineering, the American automobile business is already mobilized and ready for action in whatever direction it may be needed. This organization of the best brains in the mechanical engineering field which has been so readily transferred to war work centers around the Society of Automotive Engineers, which embraces in its membership men from every branch of the gas-engine field, whether automobile, airplane, motor-boat or stationary.

For months this society has maintained an office at Washington available for the Government's use, through which the authorities have been able to secure both reserve officers for the signal corps, ordnance bureau and quartermaster's corps, and civilian advice and assistance, the best of its kind in the world, as well. Whenever a Government bureau had a transportation problem involving the use of gas engines it could call on this office for the right men to help solve the difficulty, and they were always forthcoming.

The inspiring feature of the story is the manner in which trade rivals in peace have sunk their individual differences for the emergency and have contributed to the common cause not only their individual skill, but secret trade processes of great value, with the full realization that henceforth the information would be the common property of their rivals. Naturally, there have been some petty jealousies between the military officials and their civilian aids, and between the civilian engineers themselves. The surprising thing is that the friction has not been greater and that it has nowhere actually hindered the progress of the work. The men themselves have been too big and too busy to permit personal prejudices to interfere with the great task in hand.

The story of the new American aircraft development will read like a fairy tale some day. Its success (and there is now no reason to doubt its success) will mean that something has been created out of nothing over night. Yet a story fully as creditable, although not perhaps as dramatic in the public eye, could be told of the development of the military truck.

In modern war the quick transportation of supplies means the difference between victory and defeat. American trucks saved the French army at Verdun. It was absolutely essential that the new American army be guaranteed a satisfactory supply of trucks. Certain commercial types had proved adequate for work with the Allied armies, but, while they served the purpose fairly well, they were not designed specifically for military purposes, and they developed certain weaknesses in action. There was, furthermore, the difficulty of having three or four different makes for which supply stations and repair parts had to be furnished back of the lines. It would be far simpler to have a single standard design, made especially for military

work, the parts for which could be made in many different factories and assembled, if necessary, at other plants. Once placed in production, such a plan would insure an almost unlimited supply of both trucks and spare parts. The principle is precisely that which enters into the manufacture of the "Liberty Motor," and the men who have been handling the truck work were bred in the same school as the engineers responsible for the airplane engine.

Although members of the Society of Automotive Engineers have been agitating the subject of a standard military truck for months, the first active step toward real accomplishment came at a meeting held at Columbus, Ohio, in July, when truck manufacturers and engineers from all over the country gathered and sank their differences and agreed to devote their facilities to expediting the work. In the meantime the Secretary of War had laid aside from the contingent fund of the Department an appropriation large enough to cover the designing and testing of the proposed truck.

In August about 50 engineers picked out by the Society and invited to Washington by the Quartermaster's Department gathered and began the discussion of design. Specialists were assigned to each part—some to transmission, others to ignition, and so forth. On September 1st the design was finally determined. Ten days later complete detailed drawings were done and sample parts ordered. Parts manufacturers swore that they could not have the parts turned out for months. They were taken into consultation and when they came out they had promised to have them within 30 days as a patriotic service. This work usually takes from three to six months. As a result of this work and more like it 15,000 of the best military trucks ever made will be delivered between January 1st and June 1st. Enough orders have already been placed for commercial trucks of the regular type to supply the Army's immediate needs.

The same kind of service has been available to the Government on motor-boats, tractors of all kinds, tanks and armored cars. No country in the world possesses such potential resources in material and engineering brains when it comes to handling gas engines. Other countries produce as good—sometimes better—individual machines. None of them compare with America in producing excellent types in great quantities. The only thing lacking is time—and the extraordinary rapidity with which many men have combined to perform the seeming impossible has gone far toward nullifying that handicap.

Men in Washington with vision are wondering about the effect of this standardization on the industrial fabric when peace comes. Henry Ford has already given the most striking example which has ever been furnished of the possibilities of cheap production by standardizing parts to be turned out by machinery and training his mechanics to specialize on single operations. The present tendency at Washington is to turn the whole industry into a tremendous imitation of the Ford plant—with all available motor plants devoted to the manufacture of a single government aviation engine, single government truck, or a single tractor, as the case may be.

The reduction in the cost of production which this will entail seems obvious. Particular pains are being taken to avoid the most apparent danger—that the Government will content itself with the existing standard and fail to take advantage of improvements as they are offered. Will industry go back to the old individualized field when the war is over—with its greater production costs, but its added stimulus to improvement through competition? No one can now predict, but the best-informed men seem to feel that the result will be a compromise, with a great increase in the output of "assembled" trucks or other machines, but with enough competition of new and better types creeping in from time to time to avoid stalemate.

NORTH CAROLINA WOOLEN MILL FILLING LARGE GOVERNMENT CONTRACT.

Construction of New Addition to Elkin Plant. Raising Seed Potatoes in Mountain Region.

Elkin, N. C., October 2.—[Special.]—This town is one of the woollen-mill points in North Carolina, and has been for many years. The oldest place in the State engaged in this industry is Winston-Salem, the first mill having been established in Salem in 1765 by the Moravians, who founded that place. The mill at Elkin and the leading one at Salem are owned and operated by the Chatham Manufacturing Co., the president of which is Hugh G. Chatham.

This corporation is now filling a contract with the United States War Department for 300,000 woollen blankets, and of these, almost half have been delivered. The company purchased 500,000 pounds of wool in Boston, in addition to North Carolina purchases. The blankets are 74 inches long and 66 inches in width, and have a cotton warp of 20 per cent.

This corporation is erecting at Elkin a new mill 80x300 feet, three stories at one end and five at the other, and will install in this 100 looms and a complete equipment of other new machinery. The building will cost \$65,000, and its equipment approximately \$200,000. It is proposed to operate both the old and the new mills. In the present mill there are 350 employes, and in the new one there will be at least 500. Steam power will be used in operating the new plant for the present, but the corporation owns a hydro-electric power site on Mitchell's River, five miles away, which will be developed and will give 500 horse-power. It now uses 100 horse-power, obtained from a plant it owns on a creek which runs through Elkin.

The writer has just been on the crest of the Blue Ridge, at the point where Surry, Alleghany and Wilkes counties come together, it being 3600 feet above sea level and much the nearest high mountain point to the sea in North Carolina. The county of Alleghany has planted for the first time a big crop of Irish potatoes for market and the yields are good, the digging having begun this week, the writer taking part in it, and also showing the growers the grading and sorting of potatoes, which will be of great value to the South for seed, since the region in which they are grown is as cold as Maine and many times as high. Aroostook county, Maine, now sell the South great quantities of seed Irish potatoes, but it is proposed to develop this seed potato trade in the tier of the counties north of the Blue Ridge, Alleghany, Ashe, Watauga and Avery, and there seems to be immense possibilities in it.

The wagon road down the mountain through Roaring Gap is indescribably bad, and yet over it will be hauled the Irish potato crop which the Alleghany farmers, in response to a special call by General Manager C. B. Penny of the Elkin & Alleghany Railway, have produced this season. He furnished the potatoes for seed and the fertilizer at the last station of the road to the farmers, who embrace everyone in that county, and they and the railway will share the crop equally. Both sides to this arrangement are pleased with the results of this the first experiment of the kind ever made in the South. The quality of the potatoes is high.

The Elkin & Alleghany Railway is now graded 22 miles out of Elkin, and has reached a point about four miles from the crest of the Blue Ridge at Roaring Gap, as the road will run. During the past three years no track has been laid, but a force of about 50 convicts furnished by the State has steadily pushed the grading. No tunnelling will be necessary in the crossing of the mountain by this important road. At the present rate of construction it will require 10 years to complete it, but it seems that arrangements are on the point of being made to push it through in something like two years.

FRED A. OLDS.

Khaki Dyes Manufactory.

Dyestuffs for khaki and other similar materials will be manufactured at Greensboro, N. C., by T. Hoff Laird and associates. The plant is about completed, and will have a daily capacity of 30 barrels of dye. It represents an initial investment of about \$5500 for the mechanical equipment, and the owners expect soon to materially increase the output.

News and Views from Our Readers

A Patriotic View of Price-Fixing by an Iron Concern.

THE MATTHEW ADDY COMPANY of Cincinnati, O.

In pig-iron, when the certainty of Government prices was announced, there was paralysis in the buying and selling ends of the trade. This was followed by consternation when the \$33 price was finally announced. At the present writing the whole trade is in uncertainty and confusion. It will take time to grow accustomed to new conditions. Frankly, American business men find it hard to pass under the yoke. They have been free and untrammelled; they have been at liberty to do as they pleased with their own, and now that an irresistible power intervenes and instructs them to do this and do that there is a mental shock of the first magnitude. But the iron men realize that something had to be done. These are war times. Sacrifice is necessary. We for the present have only one thing to do, and that is, to win the war. To that end the nation's resources must be crystallized, massed and centralized to obtain the last ounce of efficiency.

In the iron trade competition ran away with itself. Of course, the iron trade is not alone in this. High prices have been a contagion—everybody has been doing it. Flour, meat, clothing, all going up, and labor advancing faster than anything else. These high prices endanger our whole social fabric. They already have made it nearly impossible for the salaried man to clothe and feed his children. In the iron business they would presently put manufacturers out of business, as has already been done in the building line.

Furthermore, the situation must not be viewed from the narrow outlook of today only. The war is to be followed by world-wide industrial expansion. America is reaching out for its full share of the overseas trade. If we here are handicapped by excessive initial costs we shall be out of the race before we ever get in it. And it is necessary to look ahead. If individual effort has brought about the present impossible conditions, then collective effort, that is, Government action, must correct them. We must win the war with iron and steel; we must after the war repair its havoc with iron and steel, and to do this workable prices are necessary. The Government price is higher than any price known to men now active in the iron trade prior to the prices prevailing in the past few months—it is an average between maximum pre-war prices and maximum high war prices.

The key of the iron situation, as far as merchant furnaces are concerned, is coke. The coke men in many fields, because of tremendous prices obtained for their product, have been fearfully disturbing the labor market by offering all kinds of extravagant bonuses. These bonuses had exactly the contrary effect to what was expected. They did not result in an increased output of coke; they decreased it because the laboring men, instead of working six days a week and hustling like the mischief, got so much money that they only worked two days and laid off the balance of the week. By cutting the price down to \$6 the coke operators will be unable to pay the absurd bonuses which they have been paying and which have upset the market, labor will be put back on wages which will be high enough, but which should result in steady work. If this result is not obtained, then the Government proposes to do as the State of Maryland has done—simply force idlers to work.

New business this week has been practically nil. Everyone waiting for the situation to develop—to know what cannot be done.

Extensive Development Planned for Cape Sable Country, Florida.

WM. D. EDWARDS, Mechanical Engineer, Chicago, Ill.

Referring to your issue of August 16, containing an article on the Cape Sable (Florida) country, you might be interested in proposed developments for this section in the line of food production and dehydration.

The Metropolitan Corporation, financed in Chicago, has about 2000 acres which will be put under cultivation wholly or in part during the coming season, farming

the same by tractors, some of which are now on the ground.

For preserving all but the first grade product of the shipping season and for handling all product grown during the rest of the year a dehydrating plant will be installed.

This plant will be 200x65 feet, and will handle about 1000 bushels of raw material per day, and will be designed for continuous operation from the receiving bins for raw material to the storage bins for dry product.

The plant will be designed, installed and operated by the writer, and is based upon experience and operating results secured by him in commercial plants of this nature which he installed in the Northwest and on the Pacific coast; however, in respect to economy of operation and high capacity it will be much superior to any of these plants.

The question of the proper location for dehydrating has involved the investigation of many sections of the country, with the result that South Florida seems to offer the ideal conditions, by offering the chance for a continuous operation throughout every month of the year.

The reduced weight and bulk of the finished product make the freight rates to market of secondary importance.

The plant in question will comprise four units, of which one will be ready for operation by the first of the year, the balance of the plant being complete soon after. All kinds of vegetables, including tomatoes, will be handled.

Great Cement Bag Production by New Orleans Cotton Mill.

W. LOEBER LANDAU, Manager Maginnis Cotton Mills, New Orleans, La.

In response to your inquiry, it is true that our output for this year will amount to 18,000,000 sacks, and that we expect to turn out during the year 1918 about 20,000,000.

The official bulletin of the cement industry shows that the annual production of cement for the past several years is about 85,000,000 barrels, or 340,000,000 sacks. Deducting 20,000,000 from this to take care of shipments of cement in bulk and wooden barrels and in paper sacks, leaves 320,000,000 sacks shipped annually in cloth. A new sack makes eight trips; or, in other words, lasts eight seasons, so that there is an annual replacement of 40,000,000 sacks necessary. On this basis you can see how we figure that we are making close on to 50 per cent. of the new bags used.

In addition to our cotton mill and bag factory, we also operate our own twine mill, where all the sewing twine used in our bags is made, and an ink factory, where we make all the printing ink used by us, so that every factor entering into the production of our bags is made in our own plant.

Sulphur as a Fertilizer.

BURDETT LOOMIS, Hartford, Conn.

The following facts were brought to my mind by the valuable reports I read in the MANUFACTURERS RECORD of September 6, made by Dr. P. J. O'Gara and Mr. Courtenay De Kalb, and the article by Prof. Sydney H. Haskell has some very important ideas directly bearing on this matter, and I decided to give them to you, showing what sulphur compound did in early days:

Between 1850 and 1870 large amounts of gypsum, which we now know to be a natural bihydrated calcium sulphate, were brought from Nova Scotia to New York and New England seaports, and taken back into the country and ground fine and sold to farmers for fertilizing purposes under the name of "land plaster."

It was the only fertilizer, except what was made on the farm, that we had in those days, and although we did not know why, or what was in it, we did believe that we secured good results from its use. We used it in many ways, both alone and mixed with wood ashes, manure from the hennery, and also composted it with the weeds and waste material from our gardens and farms. We used it on all garden products, field corn,

tobacco, potatoes, etc., and we sowed it broadcast on our pasture and meadow land, and white clover responded quickly to the treatment, also other grasses.

About 1860 we commenced to get some Peruvian guano, which had to be mixed with something or it would burn the seed, and when we used gypsum we secured far better results than when it was mixed with dirt. We had good results in sprinkling it on all our crops soon after they had come up, particularly in the garden, and it kept the bugs from eating the melons, cucumbers and all vegetables, besides improving their growth.

We used plaster extensively in the barn stables as an absorbent, and when composted with the manure from all animals it improved its value very much.

Sulphur is abundant in many of our bituminous coals, and that as well as the ammonia compounds should be saved, as ammonium sulphate makes a grand fertilizer. It can be cheaply secured, and when removed the coal is of superior quality for all purposes, and the supply is inexhaustible.

Texas Discovery of Nitrate of Potash.

WILLIAM B. PHILLIPS, Ph.D., Houston, Tex.

Referring to my recent letter concerning the reported discovery of nitrate of potash in Presidio county, Texas, I beg to say that I have just received a small sackful of the material from which the nitrate was recovered. It seems to be a dark gray, sandy shale, impregnated to some extent with the nitrates of soda and potash. With this sack I received a bottleful of nitrate of potash and soda recovered from this material by treatment with water. It is certainly an interesting thing, but I do not know that any reports by competent men are being made with respect to it.

The Nails With Lead Heads—A Possible Explanation.

W. H. D. WHEAT, General Manager the Newport Culvert Co., Newport, Ky.

For the last eight or ten years I have been a regular reader of your MANUFACTURERS RECORD, and in that length of time have not found any article at which I felt that I could take exceptions to, and to date have not found any, but believe that in your edition of September 20, on page 51, under the caption "Who Made the Nails?" you have been misinformed as to the use of the nails with leaden heads.

These nails have been in use in the United States for some time—exactly how long I do not know—for the purpose of applying corrugated-iron roofing and siding in place of the old-style steel-headed nail, which was used with a leaden washer. The use of this nail with the leaden washer required the handling on a roof or the side of a building of two pieces, namely, the nail and the leaden washer, whereas the use of the leaden-headed nails does away with the use of the washer and at the same time makes a better job than were the steel-headed nail and the washer used, as you may readily understand.

It is barely possible that your idea is correct that the nails being shipped to Sweden were intended for Germany, but it is more likely, probably, that they were being shipped for use in connection with the application of metal roofing or siding to buildings. At any rate, this is the purpose for which they are used in the United States, and the natural supposition is that these were intended for the same purpose.

I do not know who makes these nails, but undoubtedly it would not be hard to find out just who the producers were.

I am merely writing this letter to set you right on this one point, and not taking offense in any way whatever at your stand on the war situation, as I am heartily in accord with all your views on the subject.

Traffic through the Panama Canal has now been uninterrupted by slides for one year.

Inequalities in Price-Fixing Illustrated in Coal Trade

[Special Correspondence Manufacturers Record.]

Petersburg, Va., October 9.

J. W. Dawson, who has developed and operated many of the largest coal plants in Virginia and West Virginia, but who is not now engaged in the coal business, and who was for years president of the Kanawha Coal Operators' Association, was requested to give a disinterested opinion of the fixing of coal prices by the Federal Government, and on this point said:

"I believe in price-fixing and regulations of prices by the Federal Government at such a time as this, but prices of all commodities which enter into the cost of producing each other should be regulated and fixed at one and the same time if we would avoid working an injustice to one and conferring an advantage upon the other.

"Price now ordered is less than it costs many coal producers to put the coal on railroad cars. If the present price is maintained, it will result in a still further curtailment of production, and there will develop this winter a greater shortage of coal than we experienced during the past winter, notwithstanding the fact that coal is needed by a greater number of persons and for a greater number of uses than any other commodity. Not even what is so essential to life, happiness and winning the war as is an ample and sufficient supply of coal.

"Coal cannot be produced without steel, copper, mine machinery, electrical appliances, spikes and many other manufactured products; neither can any of these products be produced without coal.

"As a few illustrations:

"Twelve months past I purchased mine cars, with which to produce coal, at about \$40 each. I have quotations on practically the same car today ranging in price from \$160 to \$175 each.

"Steel rail with which to produce coal could be purchased two years ago at about \$30 a ton; today the same rail will cost between \$90 and \$100 a ton.

"Two years past spikes used in maintaining track in the mines could be purchased for \$4 a keg; today the same spikes range in price from \$16 to \$18 a keg.

"Two years past copper for use in the mines could be purchased for about 20 cents a pound; today it cannot be had for less than between 40 and 50 cents a pound.

"Electrical appliances which I purchased two years past for \$3100 cost today \$5000.

"And practically everything that enters into the cost of coal has advanced in like manner.

"It seems to me, therefore, that when we regulate the selling price of coal to the factories and producers of such commodities which enter into the cost of coal, thus reducing the cost of their products, we should in a like manner and at the same time regulate and reduce the price of those other commodities which enter into the cost of coal.

"If we fail to do this, there is a great injustice done the producers of coal, while giving an undue advantage to the producers of steel and other commodities and appliances which the coal producer must purchase.

"And it works an injustice to the 300,000 or more coal miners of the country to the advantage of the laborers working in and around steel plants and other manufacturing enterprises, as it results in the producers of other commodities being enabled to increase pay to their employes in proportion to the high cost of living, while it prevents the coal operator from paying the men who produce the coal an advanced wage.

"And it further works an undue hardship and injustice to West Virginia as a State, to the advantage of other States, for the reason that the bulk of West Virginia's revenues from outside of the State is derived from the sale of coal to other States, while at the same time she is required to purchase practically every article entering into the cost of coal from other States."

The most notable exhibit of women's industries ever made at a fair in this part of the country will be on view in the Woman's Building, and here again the war note will be the feature. The canning clubs have done an immense work in this State, and every county will be represented in this line. The canners and dryers and preservers have worked as never before.

One of the finest things the writer has found done by school children in this State is at Greensboro, where 500 acres of land, scattered here and there and lent by the owners for such use, has been cultivated by 200 boys of the high school, a gasoline tractor having been lent by the State Normal College and other aid given by the city of Greensboro. The summer crops have been gathered, including a great supply of vegetables, and now the fall crops are being put in. The boys did this work under the inspiration and special supervision of Mr. Andrew Joyner of Greensboro, who has devoted his time to it. On several sections of the land thus cultivated there are sweet potatoes, 70,000 hills in all. The State Normal College at Greensboro has a vegetable dryer, and this has not only been used for the college farm, but also without cost, to the public, and the result is a great supply of potatoes for winter consumption.

This State is working strenuously to promote sheep-raising; to increase the wool crop and the meat supply. One of the owners of a big woolen plant told the writer while in the mountains last week that he would not be surprised to see wool go to \$2.50 a pound, as prices are mounting and the demand is tremendous.

The State is also developing cattle-breeding, and this has found favor in counties where but little attention had been paid to this line of effort. A case in point is the action of the people in a section of Harnett county, west south of Raleigh. Prof. Owen Odum, the principal of the public school at Coats, went with Mr. Mason of West Raleigh, who is looking after this special line of promotion of the cattle and milk industry, to Ohio, and there Professor Odum bought 27 pure-bred Jerseys, among them being one of the finest bulls in the

State. These cattle will be shown at the community fair at Coats next week.

There have been or are to be held this season 285 community fairs in North Carolina, and in every one of them particular stress is being laid upon the war and thrift. Never were there half so many of these fairs, which do not include those in cities and towns, and in one county there are to be 14, so that really everybody will be reached, for people attend them who have not been in the habit of turning out for anything, not even a circus. United States and State officials, high and low, are showing great interest in this community work, and there are speakers galore.

Wherever the writer goes he hears people speak of the MANUFACTURERS RECORD and its simon-pure brand of patriotism. People are saying that no journal strikes a truer or finer note.

At Greensboro rapid progress is being made on the \$500,000 hotel, which is named the "O. Henry," in honor of America's most famous short-story writer, the late William Sidney Porter of that city. It is of beautiful design, of Indiana limestone. FRED A. OLDS.

Geological Report on Sulphur Deposits of West Texas.

The Rustler Springs sulphur deposits of Western Texas, situated in Culberson county and adjoining region, are the subject of a bulletin by the Bureau of Economic Geology and Technology of the University of Texas. The bulletin is credited to E. L. Porch, Jr., who, with Dr. Emil Bose, geologist of the Bureau of Economic Geology and Technology, made an investigation of the field last November.

In a foreword Director J. A. Udden reaches the conclusion, based on facts presented by Mr. Porch, that "one would appear to be justified in supposing that the original source of the sulphur is to be looked for at considerable depth in the underlying sediments, and is most probably to be found in deep-lying Permian and Pennsylvania shales containing iron pyrite and plentiful organic matter, undergoing slow heating, either from imperceptible tectonic movements or possibly from the existence of intrusive materials not yet cooled to the temperature of the rocks into which they have been forced. Owing to such existing temperature at depth, hydrogen sulphide and no doubt also other gases are, perhaps, slowly migrating through the overlying rocks up to the surface and are quietly and slowly escaping at a great number of places in the region. It would be natural that gas escaping in this manner should follow the most pervious places in the underlying rocks. It would also be natural that accumulations of sulphur in the surface material should be found to be generally dispersed superficially and that they should be found near the most pervious passages in the greatest abundance. * * *

"If we take this view of the origin of these sulphur deposits we have a ready explanation of the quite general distribution of the sulphur in the surface materials. We can also expect that while the surficial material may be found to contain some sulphur almost everywhere, more or less sulphur will also be found extending down to considerable depths in places where the rock has been sufficiently porous to afford ready escape of the gases. This deeper sulphur would form what have been called in other parts of the world sulphur chimneys, and some such deposits should also be expected to exist in this field, although explorations up to this time may not have demonstrated their presence."

Velvet Beans Do Well on Cut-Over Lands.

A remarkable growth of velvet beans, indicating another use to which idle cut-over lands may be successfully put is reported by C. W. Bailey, Meridian, Miss., who has recently made a trip to Western Alabama. Mr. Bailey said that he saw 150 acres of cut-over land near Halsell, Ala., that had no plowing, on which velvet beans planted with a hoe had grown in every direction, some vines being 40 feet long and covered with beans. A year ago this acreage was burned off, the small trees being killed. On these tree trunks, some of them of good size, the velvet beans were found in profusion. Velvet beans planted in April gain an enormous growth and yield.

Notes of Progress in Many Lines in North Carolina.

Raleigh, N. C., October 6.—[Special.]—Thousands of fine cattle, all Shorthorns or Herefords, are being shipped out of the North Carolina high mountain counties. Two thousand were sent out of Haywood to Northern Virginia this week to get what is known as their "finish." But few of the North Carolina farmers in the mountain region are prepared to give the cattle this finish, because they have not the barns and the silos. Many cattle will also go out from Ashe, Alleghany and Watauga counties.

The writer has just returned from the latter section of the mountains, and finds that Alleghany, which now has one cheese factory in operation, at Sparta, is to have three more. In that zone 32 of these factories will be in operation in 90 days, and plans are being made for the construction of at least 10 more. A great deal of the product is taken by big grocery houses in the North and West, so that relatively little is taken in the other parts of North Carolina. There is now a clearing-house for this North Carolina mountain cheese at Valle Crucis, where the cheese factory is in charge of a young woman, who took a special course in cheese-making at the State Agricultural and Engineering College at Raleigh. At this college there is now the largest class of this sort which has ever attended.

The North Carolina State Fair, which begins at Raleigh October 15 and lasts five days, will be by far the largest and most important ever held anywhere in North Carolina. It will be a "wartime fair," with patriotism and conservation as its keynotes, and will be practical throughout. Every part of the State will be represented, and over 40 of the 100 counties will have special exhibits. The finest building for women on any fair grounds in the South will be dedicated October 17, and there will be a parade of women, headed by one of State prominence as chief marshal. It will be the largest and most important gathering of women this State has ever seen, and intense pride is being shown in it.

Effect of Big Packers Coming South

By JOHN W. GREER, Moultrie, Ga.

I have been asked many times recently what effect the purchase, by the Swifts, of the Moultrie and Andalusia packing plants will have on the packing industry of the South and what effect it will have on the erection of new plants in the South.

Of course, the packing industry of the South is in its infancy yet, there being only ten or twelve complete packing plants in operation up to date and seven others under construction, which will be ready before January of the coming year. Three years ago, when the Moultrie plant was finished, there were only seven plants in the South in operation. By January there will be seven operating in Georgia, this State taking the lead in Southern packing industry. Georgia will have seven, North Carolina one, South Carolina one, Florida two, Alabama one, Mississippi one, Texas four or five. All of these plants except four in Texas, one in Mississippi and one in Georgia have been built within the last three years. Three of the Texas plants were built many years ago especially to handle Texas cattle from the big ranges. The one in Georgia built previous to the recent impetus in packing-house building was started as an abattoir twelve years ago, and by evolution has grown into quite an extensive plant. The one in Mississippi was built five or six years ago. It suffered some reverses, but is now on a solid footing and doing big business for that section. Two or three other plants in the South were started but never finished, and quite a number of abattoirs have done a little packing-house business.

But the general packing-house business as a real industry is rather new in the South, and its future, up to this time, has been a question in the minds of many careful business men. A question because, in the first place, the big packers had not invaded this territory, and, of course, it was generally supposed they would have done so had the field been inviting and profitable. In the second place, it was also generally supposed that the "trusts" would crush out any efforts that local people might make along the line of developing packing plants. In the third place, the general idea has prevailed that the South could not raise livestock that would be acceptable to the packing plants. These three ideas have been the principal reasons why business men have doubted the advisability of building packing plants in the South. The amount of capital to build and operate these plants has also been an obstructive factor, as well as the fact that few men in the South knew anything about them, and none at all knew how to operate them. Furthermore, only a very few people in the South knew what great developers packing houses are in a community. We had spent tons of energy in trying to convince the Southern farmers that a one-crop system was fatal and that diversification was absolutely necessary for the commercial salvation of the South, but all our efforts were theoretical and our energy was largely expended in advising the farmers how it could be done and why they ought to do it, not dreaming that diversification was not a farmers' problem, but largely one for the business men—that is, a market problem.

The people needed simply to be shown, and one packing house did it. A packing house built not primarily for dividends, but to make a market for livestock, and, therefore, for everything that livestock eat, and, therefore, a market for everything raised on the farm, in order that farmers might plant these things and turn them into cash, as they had been doing for years with their cotton.

And when Mr. C. L. Brooks demonstrated with the Moultrie plant that the packing business was feasible in the South, that it could be built and operated independently of the big companies, that the big packers were not the ferocious beasts that the public thought them to be—to crush out and destroy small independent plants they did not own—that Southern packing plants could get sufficient livestock to run on in the South and could make as good meats as the Western plants, and that capital could be easily secured not only to build, but to operate them, and that experts could be induced to come South and run these plants, and that Southern men could be taught how to do the work in them—when Mr. Brooks and his Southern partner

demonstrated these facts beyond question to themselves and began to tell the South about them, then the packing business began in earnest in the South, and the packing houses will continue to multiply until this part of the Union is not only able to take care of its own meat problem, but until the South shall be the principal smokehouse of the United States and for all time to come, probably the greatest meat market of the world.

The purchase of the Moultrie and Andalusia plants by the Swifts, and of the plant at Natchez by the Wilsons, and the erection by the Armour of a plant in Jacksonville, is merely a consequence rather than a cause. Other big companies will follow their lead. Their coming simply stamps the packing business in the South as a success.

The big companies are very liberal in their dealings with small independent plants as well as with the public. They cannot afford to pioneer plants as a general proposition, because they cannot get the co-operation of the people; but when a community builds a plant and co-operates in getting the livestock raised for it, the big concerns are willing to buy it and pay a liberal price for it and run it, provided that community is willing to let them have it.

Now, the coming of the Swifts, the Armours, the Wilsons, and later the Cudahys, Morris and others, is an augur of a better day for the South. They are not coming as "crushers" to put the small independent plants we are building out of business, but they are coming because, we having decided to help ourselves, they propose to help us develop the livestock and meat business of the South, and the community that is well located and wants to start a packing plant can do so, and it will find them fair competitors.

Significance of Cattle Movement from the West to the South.

By CHARLES A. WHITTLE, Atlanta, Ga.

According to S. S. Jerdan of the Bureau of Animal Industry, United States Department of Agriculture, who is in charge of the cattle movement from Texas to the South, more than 50,000 high-grade breeding animals have been purchased by the stockmen and farmers of Arkansas, Louisiana, Mississippi, Alabama, Georgia and Florida since July 1.

The MANUFACTURERS RECORD called attention to the possibilities and present opportunities of shifting cattle from the West, where there was distress because of feed shortage, to the South, where there is distress because of feed surplus, especially of velvet beans, cottonseed meal and corn. The MANUFACTURERS RECORD's articles were widely reprinted and commented upon. Interest began to crystallize into action, and Western cattle have been moving into the South by trainloads.

Colleges of agriculture in the various States by use of the county agents have discovered that there is quite a large demand for good breeding cattle. How to supply this demand and get the buyer in far Texas in touch with the Southern farmer is the problem which the Bureau of Animal Industry at Washington set itself to, and which it has solved in a very creditable manner. A representative of the Bureau of Animal Industry was located in the West, where there were range cattle to be had; representatives from various States were also called into the territory to look after the particular needs of the orders from their respective States. At the Eastern end a representative of the Bureau of Animal Industry took general charge of working up interest, who worked through the various colleges of agriculture and the county agents. The Government experts in the West graded the cattle being offered on the market according to merit, these descriptions being available to the purchaser, who was thus able to buy with fair intelligence on the recommendations of the Government experts.

In addition, the railroads of the South for the most part took keen interest in the undertaking, even to the extent of sending their own livestock experts into the Western territory to buy up desirable animals and sell them at cost to the farmers and stockmen in the South.

The Central of Georgia, the Atlanta, Birmingham & Atlantic, the Queen & Crescent and Southern railways have thus transferred trainloads of desirable breeding animals from Texas territory to the points along their lines in the South.

It is estimated by representatives of the Bureau of Animal Industry at Washington that there is at least 70,000,000 idle acres of land in the South which are suited to beef production.

It is of interest to note in this connection that the number of cattle that has been brought into the South is largest in the States furthest West, diminishing with regularity eastward with each State in turn. Arkansas leads, Louisiana follows, then Mississippi, Alabama, Georgia and Florida.

These cattle have moved along the trail of the boll-weevil and have been largely taken up in the territory where there has been experience with the cotton pest. They are being put into velvet bean fields and corn fields, the two crops that have been most widely adopted as substitutes for cotton. It is, in fact, an economic readjustment following the dislocation incident to the boll-weevil, a readjustment fostered and actively promoted by Government and State agencies.

Most of the cattle which are being brought into the South are females of good quality on which the farmer and stockman plan to build up a beef industry. Good sires from choice herds of the West and North as well as from the few good herds of the South will soon establish the beef industry on a firm basis.

George M. Rommel, chief of the Animal Husbandry Division of the Government, has just issued a statement which is to be sent to purchasers of Texas cattle in which he gives advice about how these cattle should be fed and treated to adjust them to the new climatic and food conditions. He especially warns against putting the cattle which have been freed of the cattle tick back into infested pastures and premises. Quoting Mr. Rommel: "To lessen the severity of acclimatization, plenty of dry feed, such as hay, straw, stover or access to cornstalk and velvet-bean fields should be given. Young cattle should by all means receive good care. They should get plenty of dry roughage and some concentrate in addition in order that they may develop well. One pound of cottonseed meal or two to three pounds of velvet beans or velvet-bean meal daily, with plenty of hay, should carry them through in good condition."

"With an abundance of dry hay, straw or corn stover, native cows can be wintered well with the addition of one-half to one pound of cottonseed meal or two to three pounds of velvet beans or velvet-bean meal."

"Remember that the South is a good cattle country. Cattle will do well if properly handled."

Mississippi School Boys "Doing Their Bit" by Raising Hogs.

Jackson, Miss., September 29.

Editor Manufacturers Record:

Quite a number of the local school boys are investing the money they earned during the past summer in hogs. The boys are of the progressive type, and have a well-founded idea that they can make their investment more than repay them. The boys keep the hogs in a small pasture near their homes—at least those who are fortunate enough to have the advantage of a small pasture—and expect to make a nice side-line of hog-raising.

Numbers of the boys get the food for their hogs from the mobilization camp at Jackson. They have cans out for the waste from the kitchens, and always have a plenty to feed their hogs.

The people no longer discourage the idea of hog-raising, as they have done, but admire the boys for the wisdom they have shown in investing in hogs and raising them. By next school term a good many of the boys will have made enough to give them a good start on the school year along financial lines. These school boys believe in doing their "bit," and do not hesitate to busy themselves by raising hogs. If the boys will continue the interest they have shown, and manage to take a few prizes at fairs with the best of their hogs, as well as to keep themselves in spending money, it will no doubt encourage other boys to follow their example and also raise hogs. The sooner younger boys realize what opportunities they have along this line, the sooner they will get to work and make money as well as do their "bit" for their country.

HILTON BUTLER.

Cost of Cotton Production As Figured by Texas Producer

BETTER BUSINESS METHODS URGED TO SAVE COTTON FARMER FROM LOSS — WOULD MEET PRESENT EMERGENCY BY WITHHOLDING COTTON FROM MARKET.

At a cotton mass-meeting held at Dallas, Tex., recently to consider the situation as it affects the price of cotton and cottonseed, W. B. Yearly of Farmersville, who is now connected with the State Department of Agriculture of Texas, delivered an interesting address on conditions affecting cotton production, from which some extracts are given herewith.

"The State of Texas, through the Department of Agriculture and the Warehouse and Marketing Department," said Mr. Yearly, "has undertaken to stabilize the price of cotton in conformity to the true laws of supply and demand. The Farmers' Union and the Retail Merchants' Association is co-operating to their fullest extent. Every chamber of commerce and business men's association in Texas is invited and urged to enter the work and co-operate with the State in accomplishing it.

"Let me call your attention to some of the necessities for action. Thirty days ago cotton was selling for 26 to 27 cents per pound, which did not cover the cost of production. No one has discovered any increased supply or decreased demand. The cloth which is made from cotton has not declined. Still, when the farmer began to pick this crop; when the time came for us, your friends, your customers, to begin to sell his crop, which was the business man's asset as well as that of the farmer, the price began to decline and continued without cause except that the farmer was turning it loose, and his creditors doing nothing to prevent it, until it went to 20 cents, a decline of \$35 per bale.

"Do you realize this means a decline or loss of \$420,000,000 to the South?

"You hear a great deal about a large surplus of cotton every year. Here are the figures of the Census Bureau of the Government on production and distribution of cotton from 1905 to 1915, inclusive:

Year.	Produced.	Consumed in U. S., 500-lb. bales.	Exported, 500-lb. bales.	Total consumed, 500-lb. bales.	Imported, 500-lb. bales.
1905.....	10,575,017	4,770,804	6,975,494	11,746,298	133,464
1906.....	13,273,809	4,844,568	8,825,236	13,669,804	207,733
1907.....	11,107,179	4,389,642	7,779,208	12,168,152	149,889
1908.....	13,241,739	4,929,796	8,889,724	13,819,520	165,451
1909.....	10,004,949	4,465,968	6,401,843	10,951,311	151,395
1910.....	11,608,616	4,322,987	8,025,991	12,348,978	231,191
1911.....	15,602,701	4,921,683	10,681,332	15,503,015	229,268
1912.....	13,703,421	5,250,392	9,199,093	14,449,485	225,490
1913.....	14,156,486	5,383,099	9,256,028	14,639,127	265,646
1914.....	16,134,930	5,375,305	8,931,253	14,306,558	363,595
1915.....	11,191,820	6,080,618	6,405,993	12,486,611	420,995

"You will notice there was a surplus in two years of the eleven and a deficiency in nine years. These figures do not bear out the talk you hear or the impression you have gained, but they are the figures given by your Government.

"I want to get the system of price-making clearly before your minds. It is called buying and selling future contracts. In reality, it is surveying the situation and seeing the condition of the producers, whether debt is going to force sale or not, whether warehouse facilities are provided or not, whether financial arrangements for holding are available or not, whether organization for setting and maintaining a price is arranged for or not. When this information is in hand, betting what the producer will do proceeds. The result of the betting is the price. Supply and demand may cut some figure, but behind everything else is the position of spot cotton.

"Permit me to make an illustration to show the lack of business judgment used by the South in producing, pricing and selling cotton. Suppose I tell you I want to organize a stock company to manufacture an article the whole world must have and cannot get along without, or that no one else can manufacture; that it is of such importance and so necessary that there is no use to sell more than enough stock to build or partially build the plant; that the banks and others will gladly furnish the money to pay for the raw material and pay the labor bill until the articles are completed. This would look like a good proposition, and would be the best one in the world, and any of you who could raise or spare the money would anxiously take all the stock you could get in the plant. But let us go into details

a little. Suppose I should say to you, in order to save some expense and not be bothered, we will not keep account of the cost of production, nor will we have a sales department. We will allow those who have no stock and no interest in the corporation, and the consumers of the article, to meet in some room somewhere and take into consideration that the corporation owes for producing the article, knows nothing about its cost and is not prepared to hold it, and must sell as fast as produced, they to bet what is the least the producers will sell for under the circumstances, and the result of their bets will be the price we will sell the products of our factory for. I dare say there is not a man in this house who would invest one dollar in the plant. He would be very foolish to do so. But, friends, do you know that is exactly what the South is doing? Do you know the business and industries of the South and the nation are depending upon a business conducted upon this basis? Can you see why our brightest and most energetic men and boys are leaving the farm and refuse to return? Every farm in the South that produces cotton is just that kind of a plant. No plant can run under such a system longer than its reserve lasts. The South started this practice of doing business nearly half a century ago with a fertile soil and a strong, vigorous man and womanhood. Now I believe a true analysis would show 75 per cent. of the soil is not half as productive as it was even 25 years ago, and our rural population proportionately as weak physically. Our reserve is being rapidly depleted in both.

"I wish to call your attention to the cost of producing cotton. This is a feature of the cotton business that has been shamefully neglected. The expense, as regards labor only, has been kept at a few demonstration points where they were surrounded with the most favorable conditions for cheap production, and by a few private farmers under much the same condition. They have shown in the main how cheap cotton can be produced under the most favorable circumstances, rather than the average cost under existing conditions, and conditions that cannot be materially changed under the system of no profit. However, from the figures of these favorable conditions, it cost before the war, or in normal times, from \$25 to \$35 per acre, including labor, repairs, depreciation on stock and equipment, taxes, etc., to produce and gather an acre of cotton. If we allow \$30 per acre as a basis for calculation, and take the acreage as given by the Government for the South or any State, and take the production the same year, we can arrive approximately at the average cost of the South or any State. For instance, if we take the crop of 1908, when there was no agitation for higher prices, there were 32,444,000 acres planted, which produced 13,086,000 bales of 500 pounds each. The cost was 15 cents at \$1 per day for wages, and it sold for 9 cents, a loss of 6 cents per pound, or \$592,880,000 for the South. The same year Texas planted 9,316,000 acres and made 2,627,000 bales. It cost, figured at \$30 per acre, 15.4 cents per pound and sold at 9 cents, a loss of 6.4 cents, or \$118,064,000. These figures are approximately correct—enough so to show how we are doing business. This loss simply shows the farmer worked for 58 cents per day.

"I have 18 acres in cotton this year that I have kept close account of the work done up to picking, which has just begun. I do not know how much it will make, nor just what the picking and other expenses will be, but the labor has been 79½ days' work. Figuring this at current farm labor prices for this year, feed for teams at this year's prices, also supplied and repairs, depreciation on stock and equipment, taxes, supervision, seed, etc., it makes a cost up to harvest of \$475.53, or \$28.42 per acre. Picking in our section started off at \$1 and \$1.25 per hundred. If the weather is unfavorable and picking delayed, \$2 per hundred will have to be paid for picking late in the season. We can safely figure \$20 per bale for picking. Then comes the expense of hauling it to the gin, ginning and wrapping and hauling to market. To this should be added interest on the in-

vestment of teams, implements and farm, which in this case is worth \$150 per acre, and the depreciation on houses, fences, etc. After this has been found and a deduction made for seed, I will know exactly what the lint has cost.

"Only a short distance from this field I have another one of 22 acres. This field was visited by the boll-worm. Our estimate for the 18 acres is 8 bales, and that for the 22 acres, 5 bales. It can be seen that present prices will not cover my cost of production, much less a profit. If figured on the basis of yield of the State, as it should be, I would be a much heavier loser. There has been cotton produced in Texas this year that will cost \$10 per pound, while possibly there will be some that will not cost more than 10 cents.

"The Federal department's estimate of the lint cotton of the South is 158.5 pounds per acre. A great portion of the South has, in the way of expense of production, the item of fertilizer and single mule cultivation, that does not exist materially in Texas, which must of necessity make the average over the South greater than that of Texas.

"The committee which was appointed from the departments and organizations making the call for this meeting met the 15th of August and gave out the cost of producing, gathering and marketing the 1917 Texas crop to be \$50.51 per acre. Without adding the fertilizer expense of other States, this would make the average cost over the South 31.5 cents per pound. This, too, by allowing only \$5 per acre for rent or interest on the land, and nothing for depreciation or upkeep of the farm and buildings.

"I hope I have made it plain that cotton is too low; that the slump in price was not justified by supply and demand.

"Something like two months ago there appeared an advertisement from a brokerage firm in New York, of about one-quarter page, in many daily papers in the South, and others. Later the Government announced an embargo on cotton to neutral nations. Promptly from a similar source came the announcement that the embargo would prevent the sale and export of 4,000,000 bales of our cotton. The bears made a rush, and down went the price. Again the Federal department at Washington denied the report, showing that only about 700,000 bales had been exported to neutrals during the past year, and branding the report as malicious and untrue; but it was too late, the work had been done.

"Now, the South stands as a victim at the hands of this character of financial assassins to the amount of \$420,000,000. Are we going to stand it, or what will we do? Has the producer lost this huge sum? Yes, but not the farmers alone. The producers of cotton include several classes. The farmers do the manual labor and furnish the land. The merchant who sells his supplies helps him produce the crop. The banker who either loans the farmer money to make the crop, or who lends money to the merchant to enable him to help the farmer, aids in making it. Also the wholesale merchant or manufacturer, who makes it possible for the retailer to aid the farmer, has an interest as a producer, as does the city bank, who aids the country bank. (When I say producers, I mean all of them.) All will share the loss, all are the victims of the plot of these legalized financial assassins. What can be done? It is very simple. The best-posted authorities in the United States have told us repeatedly, and the officials of the Federal department at Washington have told us that it is not possible for the South to make a surplus, and a million or more bales' deficiency looks very probable. Then the thing to do is for all interests, from the farmer to the wholesale merchant or manufacturer and city banker, to do everything in their power, use every means at their disposal to stop another bale of cotton from going on the market.

"There is no reason why holding cotton will depress or stagnate business under the present financial arrangements. Of course, it would be much easier and more effective and more quickly accomplished if the country banks would do their reasonable duty in times of this kind. If they had taken the interest in the protection of this great asset that the reserve banks proposed, letting bear speculators know they were ready to come to the rescue of cotton at any time, no doubt this slump would never have come."

In a statement issued lately by the Louisiana Board of State Affairs, the total actual State valuation of personal property given is \$1,404,202,586.

The Recovery of Potash as a By-Product in the Manufacture of Portland Cement*

By JOHN J. PORTER, First Vice-President and General Manager Security Cement & Lime Co.

Prior to the war over 1,000,000 tons per year of potash salts were used in this country. This is equivalent to approximately 300,000 tons of pure potash and represents a value of about \$18,000,000. There is every prospect that this consumption will be largely increased when a full supply of potash is again available.

Over 90 per cent. of our normal consumption of potash is used as fertilizer. Potash is one of the three elements essential to plant growth. It is present in small quantities in all soils, and we can get along for a while on these reserves. Since it is removed from the soils by crops, however, it must be replaced and in the long run must be added. There is no substitute for this purpose.

Potash is also used in the form of pure salts in various chemical industries. The quantity required is not very large, but it is very necessary, as in many cases no substitute is admissible.

For many years the world's supply of potash has come from natural deposits located near Stassfurt, Germany. It occurs there in beds associated with rock salt and gypsum, and can be mined very cheaply. The German potash industry is controlled by the Government, and all producers are required to sell through a syndicate whose policy has been to stifle competition in other countries by temporarily cutting prices. This they have been able to do because of their world market and low cost of production.

With the outbreak of war the world's supply of potash was at once cut off and the operation of many industries badly dislocated. In spite of the spur of high prices, the output of potash in this country in 1916 was less than 5 per cent. of its normal consumption, and the majority of the present producers can only continue to operate so long as prices remain at or near their present levels. It is probable that the cement industry, certain brine lakes and alunite will remain as permanent producers, but their output as at present developed is only a drop in the bucket. Extensive explorations have not succeeded in locating anything similar to the German deposits in this country. Small deposits have been found in Spain and Abyssinia, but, considering the situation broadly, there is absolutely no relief in sight from the German potash monopoly unless it be through the co-operation of the cement industry.

The cement industry is undoubtedly the chief potential American source of potash, especially when considered in connection with the use of feldspar and other high potash materials. Based on available information, I estimate that the mills of this country, as at present operated, are capable of producing commercially about 100,000 tons per year of potash, or about 33 per cent. of our normal requirements. The possibilities through the use of high potash materials are much greater.

All cement materials contain some potash. As a rule, the purer limestones contain very little, say from 0.1 per cent. to 0.3 per cent., and from there running up to 1 per cent. and over in the argillaceous limestones. Many clays and shales contain as high as 3 and 4 per cent. potash.

In the raw mix as fed to the kilns the potash varies from about .30 per cent. to 1.30 per cent. in the various mills of the country. I am glad to say that the Security company stands at the top of the list, and that the potash in our raw mix ranges from 1.10 to 1.30 per cent. Probably the average for the whole country will not be far from .75 per cent.; a small percentage, to be sure, but equivalent, nevertheless, to 4.5 pounds of potash entering the kilns for every barrel of clinker made or to 220,000 tons per year.

The profitable recovery of this potash is not simply the problem of collection, but rather the problem of obtaining it in a sufficiently concentrated form to be salable and at a sufficiently low cost to leave a profit under normal market conditions. The three factors to be considered in this connection are first, liberation; second, recombination, and third, collection.

The potash in the raw mix remains partly in the clinker, and in part is volatilized or liberated in the kilns and passes out with the stack gases. The per-

centage of the total potash so liberated varies in different mills and under different conditions from 25 to 95 per cent. The average under usual operating conditions is probably about 50 per cent. Our liberation at Security was originally about 40 per cent., but by various changes we have increased it up to a present average of over 60 per cent., and for several weekly periods have obtained as high as 70 per cent.

We have still much to learn regarding liberation, but there is evidence so far that it can be increased by high lime, hard burning and by the addition of chlorides or fluorides to the raw mix. The use of calcium fluoride or fluorspar has been patented by Messrs. Huber and Reath, and is in use at the plant of the Riverside Portland Cement Co. At Security we have developed the use of common salt (sodium chloride) for this purpose, and by its use have greatly increased our liberation. I understand that a Western mill which is getting in regular operation 95 per cent. liberation is using a raw mix containing naturally about 5 per cent. salt. If this is true, their high liberation is readily explained.

When we at Security undertook the collection of potash we expected that practically all of our potash would be in a water soluble form. This expectation was based on the results obtained at Riverside, where the Cottrell dust collection system had for some time been in operation. Naturally we were much disappointed after starting up our plant to find that the material collected contained a considerable proportion of potash in a form which was not readily soluble in water. As under trade customs prevailing in the fertilizer industry, we could not secure payment for this portion of the potash, it made a big difference in our profits and the matter was, therefore, most thoroughly investigated. We found that the trouble was due to the recombination of a portion of the volatilized potash with the finely divided ash of the coal as this floated through the back part of the kiln. This ash takes up potash vapor until it reaches a certain degree of saturation, and the amount of potash so recombined is, therefore, roughly proportional to the amount of coal ash present in the gases. The amount of potash recombined will be approximately 10 per cent. of the weight of the ash present, or for our conditions as to fuel consumption and quality of coal, will be from .8 to .9 pound of potash per barrel of clinker.

I should explain that at Riverside oil is used as fuel, so that in spite of the work done there, the real nature of the problem and the difficulties introduced through the use of coal as fuel were not fully understood when the Security company started in the potash business.

Further work on this problem developed the fact that this recombined potash was not insoluble in water, but was only very slowly soluble. It will all go into solution on boiling for 10 hours or by heating with water under 100 pounds pressure for one hour. It is also different from the potash as contained in the original mix by being readily soluble in very dilute acids. It is, therefore, entirely possible to leach all of the recombined potash from the material collected.

Many methods have been tried for the purpose of preventing the recombination of the potash in the back part of the kilns, and our chemists, Messrs. Haff and Cheesman, have applied for a patent covering the use of salt in that connection. We have found it possible to considerably lessen the amount of recombination, but so far we have not been able to entirely eliminate it.

At Security we have made use of the Cottrell electrical precipitation method for the collection of our potash. Personally, I believe that this method is the best system, but I would not claim that it is the only possible method of collection. I have no first-hand knowledge of the various water spray methods which have been advocated, but I should expect that there would be some difficulty in getting a high percentage of collection with this type of apparatus.

We have found the Cottrell system highly satisfactory from an operating standpoint. The cost of operation has been low, and it has given practically no trouble. Originally we caught about 95 per cent. of the dust and about 80 per cent. of the potash going to the treaters.

Since we have been adding salt, however, we have not done so well on collection. It has been found that the presence of chlorine in the gases causes a considerable decrease in the electrical efficiency of the treater, but, nevertheless, we have found it very profitable to continue the use of salt because the increase in liberation has much more than counterbalanced the decrease in collection efficiency.

I might as well admit frankly that we have suffered the usual penalty of pioneers and have not gotten the best type of treater from the standpoint of potash collection. At the time our plans were made all treaters had been designed from the standpoint of dust collection, and the importance of obtaining the potash in a concentrated form has not been developed. The Western Precipitation Co., owners of the Cottrell patents, and ourselves are now engaged in developing, and, in fact, installing at Security a new type of treater adapted particularly to the collection of potash. This type of treater can be built almost entirely of concrete or brick at a considerable saving in cost. It will operate on the principle of having a film of water flowing over the precipitating surface so that the material will be recovered in form of solution and slurry. It has been found that in the presence of a water film the difficulty due to the presence of chlorine or chlorides in the gases is entirely overcome and a very high efficiency of collection can be obtained. The water will be circulated through the treater until it becomes saturated with potash salts, and these will then be recovered by a process of evaporation and crystallization.

The gravest error in the construction of our treater, however, was to precipitate all the dust and potash together in one hopper. It would have been just as easy to have arranged the treater on the principle of the original plate treaters at Riverside. The dust could have been precipitated selectively, recovering the coarse dust containing but little of the potash in the first chamber and a concentrated potash material in subsequent chambers. This procedure would make the sale of the potash material vastly easier.

The quality of the material collected is inversely as its quantity. There is practically a fixed amount of potash caught per day, and this is diluted with whatever raw mix is blown over from the kilns. It is extremely desirable from a sales standpoint to collect a high potash material, and therefore to keep down the amount of dust blown over or else to precipitate out the coarse dust first as suggested above. At Security our dust loss averages about 4 per cent., and I should judge that for the average cement plant it will run close to 5 per cent. The percentage of potash in our material as collected ran at first from 5 to 6 per cent. We have succeeded in bringing this up to an average of 9 or 10 per cent., and occasionally get as high as 14 per cent. This seems to be about the limit for our style of treater, but by using the principle of selecting precipitation, there is no reason why it should not be brought up to 15 or 20 per cent., depending on the richness of the raw mix.

We have just begun to develop the possibilities of the production of pure potash salts, but at present our market is almost entirely in the fertilizer industry. We have shipped to a large number of fertilizer manufacturers, and our material has met with very general favor. It is particularly liked because of its fineness and physical condition. It also has some negatives, and must be used with discretion. The lime content will cause reversion of the soluble phosphoric acid in mixed fertilizer if the material is added in excess. For this reason it has been found undesirable to use more than a certain proportion in fertilizer mixtures, and it cannot be used satisfactorily to make very high potash goods. If the treater dust is very low in potash, it is unsatisfactory even for the manufacture of low potash goods. At the present time fertilizer manufacturers are not inclined to be critical of potash in any form, but it is evident that when German potash is back on the market a material containing less than 8 or 10 per cent. is not likely to be looked on with much favor.

It is quite possible that a market for this material could be developed, selling direct to the farmer. It contains potash, which is necessary to plant growth, and lime, which is necessary on most soils as a sweetener. The recombined potash contained in it is slowly soluble in soil acids, and, therefore, gradually available to crops as needed. There are, however, practical difficulties in the way of developing this direct market. A vast amount of educational work would be necessary, the demand would be seasonable, and under present

*Paper presented at meeting of the Portland Cement Association, Chicago, September 19-13, 1917.

standard regulations for the sale of fertilizer, no credit could be obtained for the recombined or slowly soluble potash. It is probable that in the future this last objection may be overcome. A movement to this end would have the backing of Government experts, but would necessarily be slow because of the number of people to be converted. It should be borne in mind that German potash has heretofore monopolized this market, and all trade practices have been based on behavior of their material.

I have mentioned the fact that the recombined potash can be made soluble by long boiling, by digestion under pressure or by treatment with dilute acids. All of these methods are commercially feasible if the potash is sufficiently concentrated, but it is obviously not profitable to treat a great volume of dust in order to recover a very small percentage of potash. For this reason concentration of the potash during collection should be a preliminary to any system of treatment for the recovery of the recombined potash.

Based on our experience and experiments, I would suggest the following as the ideal procedure in the collection of potash:

First, pass the gases at a relatively high velocity through a preliminary dry precipitator. The purpose of this would be to take out from 50 to 75 per cent. of the coarsest dust, which should then be returned to the kilns. With this dust would also be taken out a certain proportion of the potash, but this proportion would be small relative to the dust and would not be entirely lost, as it would pass again through the kilns.

The gases should next pass through a water film treater, where the balance of the dust and practically all of the potash would be collected. The solution obtained here would be circulated through the water film treater until nearly saturated with potash salts and would then be evaporated by the waste heat of the gases for the recovery of these salts. The sludge containing the insoluble material would be treated in digesters at 100 pounds pressure for one hour in order to liberate the recombined potash. It would then be filter pressed and the solution containing the potash would be combined with the original solution and evaporated. The filter press cake would be returned to the kilns. The cost of such a plant under present conditions would be in the neighborhood of \$150,000 for a 3000-barrel plant.

For the benefit of those who may wish to figure on their own conditions, I give the following method of calculating the probable recovery of potash:

Let A equal per cent. potash in raw mix.
B equal per cent. potash in clinker.
$$C = \frac{600A - 390B}{600A}$$

C equal per cent. liberation = $\frac{600A}{600A}$
F equal lbs. of potash combined per bbl. clinker = $\frac{3}{10}$ to 1.5, depending on fuel consumption and per cent. ash in coal.
P equal per cent. potash precipitated in treaters.

Assume 600 pounds of raw mix actually used to make one barrel of clinker, then

Lbs. of potash entering kilns per bbl. of clinker equals 600A.
Lbs. of potash volatilized in kilns per bbl. clinker equals 600AC.
Lbs. of water soluble potash entering treaters per bbl. clinker equals 600AC - F.
Lbs. of water soluble potash collected in treaters per bbl. clinker equals (600AC - F) × P.

At present prices for potash almost any kind of recovery is profitable, but there is no assurance as to how long present prices will continue, and the great question is whether recovery can be profitably continued after the war is over.

It is the trade custom to sell potash material on a basis of the units of pure potash contained, a unit being 1 per cent. of a net ton, or 20 pounds. The present market price for agricultural potash is in the neighborhood of \$5 per unit, whereas pre-war prices fluctuated between 60 and 70 cents per unit. In the opinion of those best acquainted with the industry, the price of potash will not drop to its former figure immediately on the close of the war, but it is thought likely that the price will remain relatively high for a number of years.

The cost of collecting potash at Security is now running about as follows:

Collection, including labor, power, repairs and laboratory.....\$0.14 per unit of potash
Packing and shipping.....0.08 per unit of potash

Total operating cost, exclusive of depreciation, royalty and salt addition.....\$0.22 per unit of potash

The cost of the salt addition is about \$0.25 per unit of potash, but this is not a necessary element of cost,

and can be omitted whenever price conditions become such as to give an unsatisfactory margin of profit.

These figures cannot, however, be applied to other plants because nearly all the elements of cost are constant per day, irrespective of the amount of potash recovered. The following figures, taken in connection with the calculated recovery, will give a basis for estimating cost in any particular case:

Labor required for operation, one foreman (who can also supervise packing and loading) and one or two operators per shift; about \$12 per day.

Laboratory, one additional chemist, say \$4 per day.

Power, 1300-kilowatt hours per day for 3000-barrel plant, based on dry collection plant, about \$12 per day. A wet treater would require additional power for pumps to handle solution.

Cost of operating digesters and evaporators or of packing and loading dry dust not included above.

Cost of adding salt to raw mix will run about 2.2 cents per barrel of clinker at present prices for salt. It would be reduced to about 1.6 cents per barrel in normal times.

The following is an example of the methods of calculating probable costs and profits:

Assume a 3000-barrel plant; .75 per cent. potash in raw mix, 70 per cent. liberation when using 1 per cent. salt; 10 per cent. ash in the coal and 90 pounds of coal used per barrel of clinker; 0.9 pound potash recombined per barrel of clinker; 90 per cent. collection in treater.

Using selective precipitation and water film type of treater, also treatment of slurry for liberation of recombined potash and recovery of pure potash salts by crystallization.

Pounds of total potash collected in treater per barrel of clinker equals (600 × .0075 × .7 × .9) or 2.835 pounds.

There will be a loss of about one-half of the potash collected in the preliminary treater and returned to the kilns. This will amount to about 15 per cent. of the total collected. There will also be some loss in the digesting and crystallizing process which, to be conservative, we will assume to be 10 per cent. of the potash so treated. On the other hand, there is no loss through recombination since the digesting process renders this recombined potash water soluble. Hence net water soluble potash recovered per barrel of clinker equals 2.835 × .85 × .90 equals 2.078 pounds.

This potash would be in the form of relatively pure crystallized salts, and there would be no question as to its salability.

Operating costs and profits would work out about as follows:

OPERATING COST.		
Labor	\$27.00 per day—.0090 per bbl. clinker	
Power	25.00 per day—.0083 per bbl. clinker	
Repairs	8.00 per day—.0027 per bbl. clinker	
Laboratory	120.00 per mo.—.0014 per bbl. clinker	
Salt addition0220 per bbl. clinker	
Total0434 per bbl. clinker	
Sales price per unit of potash.....	Present price, \$4.50	Assumed after-war price, \$1.00
Value of potash collected per bbl. of clinker4675	.1039
Operating cost per bbl. clinker.....	.0434	.0434
Operating profit per bbl. clinker.....	\$0.4241	\$0.0605
Operating profit per year based on full operation of cement plant.....	\$458,038	\$65,340

This result does not allow for depreciation, royalty or loss due to part time operation of cement plant.

No doubt the first thought of every cement manufacturer will be as to the effect of potash recovery on the operation of his cement plant. There is a possibility of its affecting output, fuel consumption and quality. As to these points, our experience at Security should be of interest.

The effect on output has been negligible. For the first few weeks of operation at the potash plant we had some trouble with our drafts and output was decreased. Following this came a period when it surpassed all previous records. This, however, we know to have been due to other conditions and to have no direct bearing on the potash plant.

In our case, the addition of the potash plant has reduced our fuel consumption. For five months in 1916 without the potash plant our fuel consumption averaged 96.4 pounds per barrel. For five months in 1917 with the potash plant it averaged 87 pounds per barrel. This has been brought about through more careful attention to the temperatures at the back end of the kiln. Whereas these temperatures at one time fluctuated wildly, they are now almost perfectly uniform and average much lower.

There is no evidence that the addition of the potash

recovery plant has had any effect whatever on the quality of our cement except that there has been a tendency toward harder burning since we have found that harder burning gives a better recovery of potash. Some question has been raised as to the possible effect of the salt addition on quality, as it is known that the presence of an excessive amount of alkalies in the clinker may under certain conditions cause setting troubles. Strange as it may seem, however, we have found that the addition of 1 per cent. salt to the raw mix results in a lower percentage of total alkalies in the clinker than when no salt is added. Obviously, if the salt does not go into the clinker, but is practically all volatilized and passed out with the gases, it can have no possible effect on quality. As a matter of fact, we have experienced no quality troubles which could in any way be traced to the use of salt, and the fact that a Western plant, as before mentioned, is reported to use regularly a raw mix containing as much as 5 per cent. salt is also evidence that this material is not injurious.

I would emphasize here the fact that the collection of potash does not involve any change in present methods of manufacturing cement. It is simply the recovery of a by-product that is now going to waste, and is in line with present tendencies toward the conservation of raw materials and increased efficiency in manufacturing.

I have spoken of the possibilities through the use of feldspar and other high potash materials. There are only a few existing cement plants which can do this to advantage, as not only must a regular supply of good feldspar be close at hand, but the limestone used with it must be high in lime and there must be, either in the limestone or elsewhere, a supply of alumina or iron oxide to offset the high silica of the feldspar. Under such favorable conditions, it is possible to get a mixture containing as high as 2.5 per cent. of potash and a recovery of 7.5 pounds of potash per barrel, equivalent at present prices to \$1.875 per barrel. In other words, under very favorable conditions the potash may easily become the principal product of the plant in value and the cement be relegated to the position of a by-product.

In conclusion, I would say that the Security Cement & Lime Co. has been very well repaid for its venture into this comparatively new field. Our gain by acting promptly and thus reaping the full benefit of high prices has far more than offset the loss through our failure to get the benefit of others' experience and the very best type of installation. We have had many anxious moments and much hard work in bringing the enterprise to a successful conclusion, but all is well that ends well. Now, with the cost of our plant more than returned to us from the profits of the first year's operation, and with our profits from the sale of potash in excess of those from the sale of cement, we feel that our efforts have been abundantly justified.

Machinery Trades and the Liberty Loan.

The machinery and machine tool trades of New York have organized a Liberty Loan Committee with a view to a comprehensive campaign among all of these interests on the Liberty loan. Mr. J. W. Lane, president of the E. W. Bliss Company, is chairman of this division for the city of Greater New York. Chairman Lane has called around him the following men of the city identified with the machinery and machine tool trade: Henry Prentiss, president Prentiss Tool & Supply Co.; George Doubleday, president Ingersoll-Rand Company; R. L. Patterson, president American Machine & Foundry Co.; C. I. Cornell, treasurer Pratt & Whitney Company; Henry Fuller, vice-president Fairbanks, Morse & Co.; John H. Lidgerwood, president Lidgerwood Manufacturing Co.; A. J. Babcock, president Manning, Maxwell & Moore; Norman Dodge, vice-president Mergenthaler Linotype Co.; H. R. Swartz, president Inter-type Corporation; George J. Low, F. M. Dyer & Co., and Charles A. Hirschberg, publicity manager Ingersoll-Rand Company, all of New York city.

This committee has established headquarters at 334 Fourth avenue, New York, and manufacturers of machinery and machine tools as well as their employees are invited to communicate with the secretary in regard to subscriptions to the Liberty loan.

Every business interest in the country where there are enough concerns to justify it might well unite in organizing a committee of this kind for the purpose of helping the Liberty loan.

LAUNCHINGS MAY BEGIN IN OCTOBER.

Speeding Up Work on Wooden Fleet, With Prospect That Ship a Day Will Soon be Ready.

New Orleans, La., October 6—[Special.]—Thirty thousand men at 40 shipyards along the Gulf and Atlantic coasts are now rushing to completion 250 hulls for ships which will compose the initial unit of Uncle Sam's great wooden fleet to "bridge the ocean." So rapidly has the work gone forward that it is expected the first hulls will be launched in October.

Within seven to eight months after construction was begun many of these ships will be ready for sea, and from that time on the American Government will be able to add to the Allies' ocean tonnage, as long as needed, a new wooden ship of 3000 to 3500 tons capacity for every working day in the year. This is in addition to almost as many other wooden ships being built for private interests.

New yards are springing up at many points to meet the requirements of the United States Shipping Board, which has announced its determination to build all the ships of both wood and steel that can be produced during the period of the war.

Four hundred million feet of Southern pine timbers will be needed within the next 12 months to complete the Government's wooden shipbuilding program, according to W. J. Haynen, assistant purchasing agent of the Emergency Fleet Corporation, who has recently made an extensive tour of the Southern pine producing territory.

"The Emergency Fleet Corporation program first called for the launching of hulls in November, 1917," says Mr. Haynen, "but the majority were to be launched after January, 1918. We are now trying to start the launching of hulls in October and advance the 1918 program from 30 to 60 days."

Shipbuilding at Beaufort.

Raleigh, N. C., October 6—[Special.]—The North Carolina Shipbuilding Co., Beaufort, N. C., which has the contracts for the construction of two large wooden schooners, is now building the necessary shops and providing quarters for employees. It is also constructing the building and launching way and this work will be completed in about 30 days. About 200 men are to be employed on each vessel. The company will also arrange for building steel vessels. The shipyard is between the Norfolk Southern Railway and the harbor mouth, and very near the important United States wireless station and the marine biological laboratory, where special studies are being made of food fish, terrapin, and so forth. The local members of the company are Messrs. C. E. Canfield and Charles Abernathy.

Will Build Two Schooners.

[Special Dispatch to Manufacturers Record.]

Mobile, Ala., October 10.

Horace Turner will build two schooners here, it is learned from an authoritative source. He will begin construction of ways on a site next to the Turner Terminal Co. Details are not obtainable, as Mr. Turner is in Washington.

Change of Name.

Mobile, Ala., October 8—[Special.]—The Kelly-Atkinson Construction Co., holding contracts amounting to \$10,000,000 to build composite ships for the United States Shipping Board, will lose its identity here. The name has been changed to the Mobile Shipbuilding Co. In other words, it is a company within

a company. The officers of the Mobile Shipbuilding Co. are the same as those of the parent organization.

New Southern-Built Vessel for Porto Rican Trade.

New Orleans, La., October 8—[Special.]—The four-masted schooner Rosemary, which was built by M. Martinolitch at Handsboro, Miss., for J. F. Stuart and associates of Gulfport, was launched on Bayou Bernard last Saturday. This vessel, the largest ever built on the Mississippi coast, cost \$125,000. It will be placed in the Porto Rican trade.

Shipbuilding News of the Week.

Contract has been awarded by the American Shipbuilding Co., Brunswick, Ga., to J. G. Conzelman, Brunswick, for erecting a two-story 150x60-foot mill-construction shop building, with cement floor and composition roof, and for a two-story 100x40-foot stock building. This company was recently referred to as increasing its capital from \$50,000 to \$500,000, with various improvements contemplated. It has its executive offices in New York.

Ten acres of land has been purchased by the International Shipbuilding Co., H. H. Roff, manager, Pascagoula, Miss., for additions to its plant. This company has 12 sets of ways, and will construct four additional sets to be equipped with facilities for constructing steel ships. It will also build a hotel and 50 cottages for its employees. Twelve wooden ships are now under construction at the International yards, and contracts have been secured for building four 8000-ton steel vessels, each 500 feet long.

The Kelly-Atkinson shipyards at Mobile will be operated by the Mobile Shipbuilding Co., which has been organized as a branch of the Kelly-Atkinson Construction Co. of Chicago. This latter corporation was recently mentioned as to establish yards for the construction of composite wood and steel ships, its plant to include mill-construction buildings (machine shops, blacksmith shops, power-house and yard office building) costing \$50,000.

Weekly Review of Coal and Coke Production by Government.

In the weekly report on the production of bituminous coal and the causes of loss of working time, compiled by the Geological Survey, Department of the Interior, October 6, it is stated that troop movements, congesting traffic and disturbing the labor force at the mines appear to be responsible for the sudden drop in coal production during the week ended September 22. The ratio of tonnage produced to full-time capacity, for all mines reporting since the weekly statistics were undertaken, fell from 72.3 per cent. in the week of September 15 to 69.7 per cent., the lowest level recorded since August. All districts shown in the accompanying table registered

PERCENTAGE OF PRESENT FULL-TIME OUTPUT PRODUCED IN CERTAIN STATES BY ALL OPERATORS MAKING WEEKLY REPORTS.

State.	Week Ended—			
	Sept. 1	Sept. 8	Sept. 15	Sept. 22
Iowa	81.4	79.4	89.7	81.1
Illinois	76.0	76.5	71.5	71.4
Indiana	72.9	74.9	70.8	65.6
Ohio	68.6	80.6	75.1	68.5
Western Pennsylvania	76.9	81.9	83.5	82.9
Winding Gulf region, W. Va.	87.8	74.7	86.0	91.4
Southwestern Virginia	91.7	96.0	96.3	93.8
Eastern Kentucky and Tenn.	10.8	10.8	10.8	10.2
Alabama	83.6	82.2	85.4	92.9
Kansas and Missouri	79.4	79.2	83.9	66.9
Oklahoma and Arkansas	63.9	72.1	72.2	64.2
Total reporting from beginning	72.0	74.8	72.3	69.7

decreases except Alabama and the Winding Gulf region of West Virginia. The decrease was small in Illinois and Western Pennsylvania and most marked in Indiana, Ohio and the Southwest. In the last six weeks the strike deadlock in Eastern Kentucky and Tennessee has cost the country more than 1,000,000 tons of bituminous coal from those mines alone that regularly report to the Geological Survey. Were complete statistics available the loss would probably be found to exceed the days' output of all the soft coal mines in the country.

CARLOADS OF BITUMINOUS COAL ORIGINATING ON PRINCIPAL COAL-CARRYING ROADS.

District.	Week Ended—				
	Sept. 1	Sept. 8	Sept. 15	Sept. 22	Sept. 29
Ala., Eastern Ky. and Eastern Tennessee	5,545	5,471	5,732	5,163*	5,632
Ill., Ind. and Western Kentucky	22,329	19,459	22,749	21,424*	23,655
Pa. and Ohio	47,622	42,244	48,723	46,301*	48,988
W. Va. and Va. smokeless	13,549	11,856	13,879	13,236	14,065
W. Va. and Va. high volatile	18,055	18,678	18,499	18,046*	18,832
West of the Mississippi	1,923	1,664	2,053	2,061	2,088
Total	109,023	99,372	111,686	106,191*	113,130†
Cars loaded by 114 roads, including those above	188,605	165,717	199,867	183,090*	192,720†
*Revised from last report. †Preliminary figures, subject to revision.					

Shipments of beehive coke by the principal coke carriers shared in the general recovery which marked the week ended September 29. The total for the month of September, however (56,836 tons), was much less than for any of the three preceding months.

Carloads of coke originating on certain coke-carrying roads: Total month of June, 62,734; total month of July, 61,287; total month of August, 64,394; total month of September, 56,836.

Forty-four of the principal operators in the Connellsville, Greensburg and Latrobe districts of Pennsylvania reported a production of coke amounting to 68.4 per cent. of their joint capacity, based on the railroad rating. As compared with the ratio for the preceding week (70.5), this was a decrease, which appears to have been caused by a shortage of mine labor. Losses ascribed to this cause constituted 4.5 per cent. of the rated capacity.

Indications of Petroleum Field in Terrebonne Parish.

New Orleans, La., October 8—[Special.]—Announcement is made today by Cassius L. Clay, State Analyst, that an examination of the drippings from one of the McCormick gas wells in the Terrebonne parish (Louisiana) field, near Houma, shows that the fluid is a petroleum product. Commenting on the analysis, Mr. Clay says: "The oil appears to be a crude, light mineral oil, resembling petroleum."

The analysis of the drippings from the McCormick well definitely establishes the fact that the gas comes from petroleum, and that it is not marsh gas.

The laboratory of the State Board of Health also made an analysis of a petroleum that was washed ashore on the beach of Last Island, on the Terrebonne parish coast. The report of the State Analyst follows: Bituminous matter, 97.49 per cent.; non-bituminous organic matter, 1.62 per cent.; asphaltine, 75.41 per cent.; petroleme, 22.07 per cent. This product appears to be principally bituminous matter, conforming in analysis to a good grade of asphalt.

Large quantities of this matter have been washed ashore on Last Island. Albert M. Dupont, a Houma merchant, has two tons of it. Geologists are of the opinion that petroleum oozes from the bed of the sea at some point off the Terrebonne coast, and that the salt water solidifies it and converts it into an asphalt product.

Garbage from Army Camps as Provender for Pigs.

W. W. GOLDSMITH, Secretary Radford Board of Trade, Radford, Va.

Do you know what means have been adopted to conserve the swill and garbage that will be produced at the army cantonments? If some steps have not already been taken they ought to be at once, for many thousand pounds of pig can be raised on the refuse from the cantonment mess.

Valuable Information Gained.

EMANUEL GOODMAN, President Mammoth Mining Co., Inc., Lynchburg, Va.

Enclosed please find subscription to your most valuable booklet.

I read the MANUFACTURERS RECORD with much pleasure, and have secured much valuable information therefrom, and have been able to save many dollars by buying through your publication.

Good Highways a War Necessity

GREAT CROPS IN VAIN WITHOUT GOOD ROADS FOR THEIR DELIVERY.

"Unless God Almighty freezes the roads in the North and withholds the rains in the South, the country is going to be woefully disappointed in the farmers' ability to deliver the great crops they have raised."

This is the striking way in which an Indiana farmer stated to me the situation as regards the impassable condition of the roads in that section during the winter season," said W. P. Blair of Cleveland, in talking about the road question to the MANUFACTURERS RECORD.

"Fact is stranger than fiction," said Mr. Blair. "You may have had that repeated to you time and again, but to be deeply impressed with its truth, we must be confronted with the facts in a personal way."

"We pride ourselves upon the conveniences and the economies of our civilization, but shall we say that we are very short of them, or merely say that they are intermittent and variable. We may possess them in some respects to a degree of refinement. When we walk into the shop with everything perfected to our taste, it is impossible to realize the travel from the soil or field from which came that which is so attractively and ideally made and displayed in the shop. What is the relation that the highways of the country bear to all of this? The suggestion seems vague, but while eating corn and drinking milk at the table of a farmer in Southwestern Indiana, on whose 510 acres was grown this year about 60 bushels of corn to the acre, I asked him the question: 'If you were called upon to deliver this corn where the Government wants it this coming January or February, could you comply with the request?' 'No, not at all,' he answered, and to this he added: 'I want to say to you that unless God Almighty freezes the roads in the North and withholds the rains in the South, the country is going to be woefully disappointed in the farmers' ability to deliver the great crops they have raised.'

"A regular, constant and continuous supply of material is needed at the point of consumption. The soldier cannot well live in health while waiting for the road to dry up or freeze over. This situation is found all over the country where we have and yet we have not, for what we have in one point is not within our reach at the point needed for consumption."

"The city of Toledo, O., boasts of a population of more than 150,000. Less than 60 miles away is the great city of Detroit, leading the world in the manufacture of automobiles, and yet there is no highway connecting these two cities over which you can scarcely motor at all, much less travel with any degree of comfort. Only a few days ago, as directed by the secretary of the Toledo Automobile Club, I drove over 60 miles out of the way in order to reach Detroit at all. We denounce the railroads with an exasperated feeling because our shipments are delayed, and many an irate man has stormed with fury because he is denied cars day by day as needed. If because we either had no clear vision in the past of our needs of today, or because we ignored these needs, is there any earthly reason just now why we shall not make immediate amends, at least to an extent within our power, and supplement our transportation facilities by giving us highways over which we can transport that tonnage which the railroads are unable to handle? This could be done, first, by immediately connecting up all of the available and passable stretches which can be made available for hauling by truck and releasing to railroads possibly thousands of cars which, in many cases, are now needed for long hauls. The mud of the South and the mud of the North will not, of course, keep us from winning the war, but if the food in this country is needed to win the war, the ultimate victory is going to be delayed unless this food be promptly supplied, and that is not possible under present highway conditions."

"I have recently completed a 2000-mile study of the road and crop relationship, and in a Southeastern Ohio county, which has borne this year an abundant crop, it was found impossible to travel following a rainfall of two days' duration, and passengers of six-cylinder cars were found leaning over the farmers' fences awaiting a dry-up. Here and there was an empty motor truck intended for delivery somewhere, but stopped by the road-

side on account of impassable roads. A query to a farmer about these conditions brought forth the statement that he never allowed his teams to go on the road following such a rain. Crops raised in such counties have been known to wait from six to eight months on roads to be providentially provided over which the crops might be marketed."

"The refined influences of the finer arts and the mud of the highways are wide apart, but, deplorably so, even the commonest comforts are widely separated from us by the mud roads of the country. How long shall the hindrances and handicaps of the one be permitted to endure to the lessening of the betterment of all things else? In these times of exceptional requirements, roads are no longer mere conveniences for the purpose of adding to our pleasure and comfort, nor are they wholly one of economy. They have become a real question of bread and meat for the consumer in the city and for shipment to the Allies to help win the war."

"A study has recently been made of the value of a good highway in the development of the country and the handling of traffic. Some weeks ago an accurate account was kept of the traffic by automobile and motor truck on the Cleveland-Akron highway, beginning at a point 10 miles northeast of Akron from 6 o'clock on Friday evening until 6 o'clock on Monday evening, three full days. There passed over this piece of road 9804 vehicles. Of this number, 507 were commercial trucks of from 1½ to 5 tons capacity each, 9106 were passenger motor vehicles, and only 191 horse-drawn vehicles. The actual tonnage of goods transported by these motor trucks in these three days amounted to 890 tons, equivalent to 22 40-ton cars. Included in the material handled in these motor trucks were steel, brick, concrete blocks, farm feed, farm machinery, foodstuffs, fruits, furnaces and furniture, gasoline, gas tanks, greenhouse products, hardware, lumber, machinery, merchandise, milk, paving material, sewer pipe, sheet steel, automobile tires, tire rims and window casings. The number of passengers carried in the 9106 automobiles was estimated at 27,000, which would represent 180 cars carrying 150 passengers each."

"The Cleveland-Akron highway, on which this survey was made, with the exception of about three miles, is paved with brick, and, in addition to the sporadic traffic, there is a large volume of regularly organized commercial transportation making daily use of the road."

"So remarkable has been the effect of this improved highway, a portion of which was laid with brick 14 years or more ago, that recently every farmer whose lands adjoin the road signed a petition for a parallel road between these two cities in order to furnish increased road facilities parallel and but a few miles distant from the present main highway. The road already in use has demonstrated such extraordinary worth to the business men of the two cities that they have joined the petitioners in a request to the State Highway Advisory Board to build the additional route at once, and its need so impressed the board that they have approved the project."

"I am satisfied that there is no more important question before the country than the linking up of good highways for wherever good highways are disconnected by some impassable bad stretch their value is greatly minimized. There should be some Governmental power which would investigate the whole situation throughout the country and bring about the connecting up of all existing good highways by eliminating all bad stretches and thus stimulating the whole country to the building not only of these main highways, but to bringing about a general road system which would make possible the transportation between the country and the city. The railroads are wholly unable to meet this condition. The transportation of the country and the ability of the nation to feed its soldiers, to handle the vast traffic connected with the war and to ship foodstuffs to Europe at a time when the call may be the greatest is dependent upon this. Highways should be built as quickly as possible, and especially should every bad stretch of road, which separates good highways already constructed, be eliminated as quickly as possible by uniting the good stretches and thus make a complete, continuous highway system."

Mr. Maurice B. Greenough, chief engineer of the

National Paving Brick Manufacturers' Association of Cleveland, O., in giving some additional facts in regard to the statements made by Mr. Blair, writes the MANUFACTURERS RECORD:

"I have your letter of October 1, acknowledging receipt of information sent you regarding traffic on the Cleveland-Akron road. It occurs to me that you might be interested to know that out of the successful use of the present highway has grown a desire on the part of business men of Akron for another highway paralleling the existing one, which shall be designed primarily for heavy truck transportation."

"Backed by the business men of Akron and the Akron Automobile Club, a petition for this second road was secured, signed by every abutting property owner, asking for a monolithic brick highway as the type of improvement. It is further proposed that this pavement shall be 20 feet wide, and built of four-inch brick laid upon eight inches of green concrete."

"We cannot but feel that brick has rendered a real service on the present road, and that this fact is appreciated both by the business men of Akron and by those who about upon the new route."

"The State Advisory Board has given its full approval to the new highway, and its construction will be undertaken probably the coming season."

"The purpose of the whole movement is to provide for freer movement of freight and passengers between two very important cities of Ohio. At no point on the route are the two highways more than five miles apart. It is expected through the greater width of the new highway that it will be more favored by truck haulage, further assisted by the fact that the distance will be shortened a matter of four miles."

"This whole movement is indicative of what must come throughout the country as a whole if industry and commerce is not to be seriously set back by lack of transportation. The public at large must realize that in the building of highways for commercial travel they must build of a type which possesses the inherent quality of endurance under hard service. This is a fact which they have not yet as a whole realized, and in their own interest it should be strongly called to their attention until a greater appreciation of the truth is evident."

Big Castor Bean Industry for Florida.

It is reported from Citrus Center, Fla., that the Castor Oil Company of America, a Michigan concern, is preparing to plant 4000 acres of Florida land in castor beans. Five hundred acres have been planted and broken, and the work of extending the acreage to cover the whole tract is under way. A big caterpillar tractor is in operation, breaking new land at a rapid rate. It is proposed that a mill for extracting oil, with apparatus for refining it, will be ready for operation by the time the first castor beans mature. The refuse from the mill in the form of castor bean meal is said to be very excellent fertilizer, which will be marketed locally. The oil mill will have a capacity sufficient to not only take care of the entire tract of 4000 acres, but the company is planning to handle all of the seed which can be raised by the farmers in adjacent territory. To this end the company is furnishing seed to responsible farmers and contracts to purchase their product whenever ready for the mill.

Hess Steel Corporation Additions.

Further particulars have been obtained regarding the Hess Steel Corporation's additions, for which contract has been awarded, at Baltimore. The furnace building extension will be 220 feet long by 50 feet wide, with 19,000 square feet of floor space, costing \$100,000, while the office building will be an 80x42-foot two-story structure costing \$25,000.

Steel and corrugated iron has been chosen for the extension and concrete construction for the office, with composition roofing and wood finish on concrete for the floors. A vacuum heating system costing \$4000 and electric-light wiring and fixtures costing \$1500 will be installed. The Crowell-Lundoff-Little Company of Cleveland, O., is the building contractor. Additional electric melting furnaces, cranes, pouring equipment, etc., will be installed by the Hess Steel Corporation, which manufactures electric furnace alloy steel.

EXTENDED USE OF ARTIFICIAL GAS.**Industrial Purposes and Heating of Dwellings and Business Buildings Now Demand It.**

Some exceedingly interesting and impressive facts about the great increase in the use of artificially produced gas for industrial purposes and also for heating buildings are stated in the annual report of President Herbert A. Wagner of the Consolidated Gas, Electric Light & Power Co. of Baltimore, which has just been issued for the company's year ended June 30, 1917. Among other things, he says:

"The fiscal year has been marked by a steady increase in the volume of gas used for industrial purposes. The gas used on industrial schedules for large customers shows approximately 100,000,000 cubic feet increase over the last fiscal year. In addition to this growth a number of applications representing large installations are under consideration, the consummation of which will bring about a very considerable increase in the use of gas for industrial purposes during the coming year.

"The year has been marked by great activity in the application of gas to house heating. At the end of the year 265 installations had been completed for the heating of commercial buildings and residences by the use of central gas furnaces; also a large number of gas-fired radiators had been installed in both commercial buildings and residences. There will undoubtedly be a tremendous growth in the use of gas for residence heating in the future, as well as the heating of large commercial buildings and apartment-houses.

"Probably at no time since 1904, when your company entered into its agreement with the Maryland Steel Co. (now a part of the Bethlehem Steel Co.) for the purchase of by-product coke-oven gas, have the advantages of this contract been of greater importance than at present. Practically all over the country gas companies have been more or less seriously affected by the increased price of coal and the increased cost of oil used in the manufacture of gas.

"The volume of coke-oven gas purchased during the year was the largest in the history of the company. The steel company is adding 240 additional coke ovens at Sparrows Point to the 120 ovens now in operation, which will make available for your company an amount of coke-oven gas sufficient to supply its needs for some years to come. To provide for this increased quantity of coke-oven gas work has been started at the Spring Gardens station for additional purifying capacity, and the company is laying a new 30-inch pipe line from Sparrows Point to provide adequate capacity for conveying the increased quantity of coke-oven gas. • • •

"The system now has under maintenance 775 miles of mains in use and 126,052 service pipes in use, having added during the past year 21 miles of mains and 3794 service."

Concerning the new 20-story office building of the company, it is stated that after the company forces occupied their quarters 12 stories were left available for rental to other tenants, and that at the close of the fiscal year, eight months after the building was finished, 74 per cent. of this rental area was occupied.

The electric operations of the company, like the gas department, also show remarkable gains as compared with last year. There were 418 additional contracts made for industrial power, aggregating 35,671 horsepower. About 86 miles of cables were added during the year to the underground transmission and distribution system.

The income statement of the company for the year shows: Gross income, \$8,498,809.36; operating expenses and taxes, \$4,480,164.85; net earnings, \$4,018,644.51; net income after fixed charges, \$2,346,421.56; surplus after dividends paid and payable, \$1,040,674.79; net surplus after \$600,000 reserve for depreciation, amortization, etc., and \$300,000 reserve for contingencies, \$140,674.79.

Gross income increased as compared with the next previous year \$1,067,040.55, or 14.3 per cent., and net earnings increased \$434,952.07, or 12.1 per cent. Gross income from electric sales was \$4,763,066.20, increase \$881,400.24, or 22.7 per cent.; gross income from gas sales was \$3,695,547.02, increase \$235,676.21, or 6.8 per cent.

The balance-sheet shows total assets of \$58,599,926.96, which includes the plant and equipment, real estate, franchises, etc., at \$48,532,622.73. Investments in stocks, bonds, etc., amount to approximately \$2,500,000, and unfinished plant investment to over \$625,000.

Louisville's Advantages as a Potential Industrial Center.

Louisville, Ky., October 6.—[Special.]—In an address one evening last week to the Engineers and Architects' Club of Louisville, H. B. Hanger of the Mason & Hanger Co., the company which had the contract for construction of Camp Zachary Taylor, the Federal army camp at Louisville, paid a high compliment to Louisville's advantages as a potential industrial center. He recited the readiness and ease with which his company in a very short time organized a force of more than 10,000 workmen, at a wage cost less than all but a few of the southernmost of the other 15 cantonments, and, in two months after the ground was broken, turned over the completed job to the Government with a record of no labor troubles at all.

"Your commercial organizations, your Board of Trade and your Industrial Foundation," Mr. Hanger suggested, "have not been making enough of these advantages. That a contracting company should be able to come here and perfect such an organization as we built up in so short a time and get a big job done with a total absence of labor troubles is one of the biggest recommendations that could be made for the city. We found good, honest, steady American labor of an ideal temperament, and that is one of the reasons why the camp at Louisville was not only finished first of all, but probably at a lower cost than any of the other camps."

Million-Dollar Company to Make Steel Ties in St. Louis District.

St. Louis, October 8.—[Special.]—A new rolling mill, designed especially for the manufacture of steel railroad ties, is to be built at once in the St. Louis district by the Tri-City Steel Corporation, a Delaware corporation.

It is stated that the new plant will cover eight and one-half acres of ground, recently purchased in the vicinity of Madison, Ill., and that it will be ready for operations within three months.

General offices of the company will be opened in St. Louis. Officials of the company are S. E. Camp, president; A. L. Taylor, vice-president; C. A. Pearson, secretary; J. F. Sweeney, treasurer; H. T. Lindsay, general counsel. The directors are S. E. Camp, St. Louis; C. A. Pearson, St. Louis; C. E. Nelson, St. Louis; James Griffiths, St. Louis; H. T. Goddin, Naylor, Mo.; E. T. Galligan, Coal City, Ill.; J. F. Sweeney, Chicago; A. L. Taylor, Harrisburg, Pa.; W. E. Hawk, Harrisburg, Pa. The capital stock is \$1,000,000.

Louisiana Brick Plants in Full Operation.

New Orleans, La., October 5.—[Special.]—Southern brick manufacturers with offices here report that they are working their plants full blast to be able to take care of the growing demand for their product. The greater part of the brick demand now comes from the interior rural districts, where architects and contractors say building operations are due to soon show a very appreciable increase.

Big building operations are looked for in South and Southwest Louisiana after the sugar and rice crops have been harvested, which will be about the first of the new year.

Building Tire Factory at Ardmore.

Construction is progressing upon the Ardmore-Akron Tire & Rubber Co.'s factory for automobile tires, tubes and accessories. This corporation is building its plant at Ardmore, Okla., and all the machinery has been purchased. The plant will be 90x300 feet in size, with all machinery driven by electric power. It will be built in units, the first unit to be large enough for the installation of machinery to produce 1000 tires per day.

Big Stockyards for Montgomery.

Plans and specifications have been completed by Gaffney & Epping of Louisville, Ky., for the plant which the Union Stockyard of Montgomery will build at Montgomery, Ala. They have been submitted to contractors for bids, and call for the following construction: Yards

482 feet long by 317 feet wide, divided each way by four roofed alleys; 31½ acres under roof; 28 pens for quarantine cattle; 42 pens for other cattle; 48 pens for hogs and sheep; 11 unloading chutes; dipping vats; corn cribs; hay pens; assorting pens; feed platforms; wagon depot; 116x80-foot office building containing 10 offices and exchange room. The Union Stockyard is under the general management of H. F. Snow, and recently announced its intention to invest from \$35,000 to \$50,000 for its facilities.

New Record in Mineral Production.

The total value of the mineral production of the country in 1916 was more than \$3,470,000,000, increasing \$1,076,200,000, or 45 per cent., over the \$2,393,800,000 recorded for 1915, and exceeding the former record year (1913) by more than \$1,000,000,000, according to preliminary figures compiled by the United States Geological Survey, Department of the Interior.

Practically all the minerals shared in this increase, gold being the only one of the more important products that showed a decrease in value, though silver and anthracite showed decreases in quantity but increases in value.

Pig-iron and copper contributed more than 78 per cent. of the total increase. Coal and petroleum contributed 76 per cent. of the increase shown in the non-metallic products.

Electrical Contractors Hold Annual Meeting.

New Orleans, La., October 8.—[Special.]—Meetings of the executive committee and the directors here today marked the preliminary events of the annual convention of the National Electrical Contractors' Association. The convention proper will open Wednesday and continue for three days. Between 400 and 500 delegates from all parts of the country are expected.

The importance of the session lies in the fact that war conditions and the industrial growth of the country have made it necessary to reorganize the association and introduce methods into the electrical business that will prove more effective and less wasteful. Robley Stearnes of New Orleans, president of the association, will be re-elected, it is believed.

Many electrical exhibits will be on view during the convention.

To Increase Efficiency of Fertilizer Salesmen.

Under the auspices of the Southern Fertilizer Association, a series of meetings will be held to promote the efficiency of the fertilizer salesmen at the following points: Norfolk, Va., October 15, 16; Charleston, S. C., October 16, 17; Savannah, Ga., October 17, 18; Birmingham, Ala., October 18, 19; New Orleans, La., October 19, 20. The meetings will be addressed by recognized authorities on various subjects, including H. N. Tolles of Chicago, on "Salesmanship;" Prof. J. N. Harper, on "Soils and Their Deficiencies;" Prof. J. C. Pridmore, on "Plant Food—What the Crops Require," and Prof. Charles A. Whittle, on "Profits from the Use of Fertilizer." Leading manufacturers will discuss methods of making fertilizers, and a representative credit man will talk about credits.

Harbor Work Stopped.

Beaufort, N. C., October 6.—[Special.]—Work has stopped on the big breakwater for the harbor of safety at Cape Lookout, 10 miles from Beaufort. Congress failed to appropriate money to complete the work, which is about four-fifths done, and the D. L. Taylor Construction Co., which had the contract, has removed its offices and men from Morehead City and its big equipment from that point and also from the Cape. Mr. Armstrong, the company's manager in the construction work, and Lieutenant Johans, U. S. A., the engineer-inspectors, have departed, and no one seems to know when the work will be resumed. Enough has been done, however, to make the breakwater of value. The outer end, 2000 feet long, is the section remaining to be finished.

REWARD TO "GET" KAISER.

Nearly Every Man in Poolville, Tex., in
\$1246.50 Pool for Captor.

[From Philadelphia Ledger.]

Fort Worth, Tex., October 8.—Poolville, Parker county, near here, has raised \$1246.50 as a reward for the delivery of the German Emperor into the hands of the American authorities. Virtually every male resident of the town contributed.

Patriotism's Trumpet.

[Huntington (W. Va.) Herald-Dispatch.]

The unflinching, intelligent and effective support given America by the newspapers of the country is such as to bring to the members of this great fraternity feelings of mingled pride and gratification. Outstanding among this loyal and energetic force is one journal which, if any may be justly singled out for special praise, is entitled to that favor. This is the MANUFACTURERS RECORD, published in the city of Baltimore, circulated extensively among the business men of the country, and particularly in the South, to whose industrial needs it is dedicated.

Of all the periodicals that have undertaken to play a patriotic part in relation to America's duties, the MANUFACTURERS RECORD unquestionably stands at the head of the list. Richard H. Edmonds, whose firm and accurate grasp of economic problems gives him a vantage ground from which to fight, combines the highest qualities of patriotism with undaunted courage and an eloquence which drives the truth home with the fullest measure of conviction. By reason of the fact that his clientele is composed largely of business men, among the many of the leading producers of the country, Mr. Edmonds occupies a powerful position and has accomplished untold good for the cause of humanity. Under his guidance the MANUFACTURERS RECORD is a trumpet of patriotism whose blasts have awakened hundreds where awakening was most needed. No American can read consistently the editorials of this great journal without being a better patriot, nor yet without cherishing a wholesome admiration for their able and fearless author.

[We must apologize to our readers for republishing this personal commendation from the Herald-Dispatch on the ground that it is merely an illustration of how the work of the MANUFACTURERS RECORD in regard to this war, which was criticised by many for a year or more, is now recognized as not having been in vain.—Editor MANUFACTURERS RECORD.]

TOMATO-CANNING INDUSTRY BRINGS PROSPERITY TO THE OZARKS.

Eight Plants to Pack 500 Carloads of Cans,
Worth \$1,500,000.

Crane, Mo., September 23—[Special.]—The largest active industry in the White River country of the Arkansas and Missouri Ozarks at this time is the tomato-canning industry. The activity extends from Browns Spring, in Stone county, Missouri, to Ruddells, in Izard county, Arkansas, along the White River division of the Missouri Pacific Railroad. The daily production from all plants is approximately 25 carloads a day.

Eight plants this season will pack 500 carloads of two and three-pound cans of tomatoes, which will be worth approximately \$1,500,000.

Labor is scarce, but men, women and girls in other occupations go to the plants every night after their own work is completed and peel tomatoes until midnight. The industry has brought a great inflow of money to the section, and farmers, business men and laborers are prosperous as they never were before.

The industry has been developed during the past five years. Tomatoes as a crop yield larger returns in this section than any other crop that can be grown. Many of the farmers are realizing more than \$100 an acre.

The Government will get 18 per cent. of the pack this year. This was reserved on an order from the Council of National Defense, and will likely be shipped to the cantonments in the Middle West and South.

The soil of the White River country of the Arkansas and Missouri Ozarks seems peculiarly adapted for the

culture of tomatoes. There has never been a failure culture of tomatoes. Many of the fields are on the steepest, roughest hillsides. No fertilizer is necessary to make them produce; just ordinary care and cultivation. Some of this land will return this year, in gross tomato production, twenty times the price it could be bought for before it was cleared up.

Plans for Big Electric Station.

Plans and specifications are now being prepared for the electric generating station which the Kansas City (Mo.) Light & Power Co. intends to build for increasing its supply of electricity in the Kansas City territory. Sargent & Lundy of Chicago are the engineers who are preparing the plans and accepting bids for the construction and equipment of the plant. Two 20,000-kilowatt turbo-generators have already been ordered from the General Electric Co., Schenectady, N. Y., which agrees to deliver this machinery by next May. It is proposed to have this big electric station completed by November, 1918, and unauthoritative reports state that the cost will be from \$3,000,000 to \$4,000,000. The Foundation Company of New York has received contract to construct the foundations.

Production of Steel Ingots in 1917.

Reported by 29 companies which made 88.14 per cent. of ingots in the previous year, the production in gross tons of steel ingots in 1917, as given by the American Iron and Steel Institute was as follows:

	Total first six months.	July.	Aug.	Sept.	Total nine months.
Open-hearth.....	13,681,483	2,152,479	2,251,013*	2,195,556	20,280,531
Bessemer.....	5,164,139	777,171	863,573	770,064	7,575,247
Other.....	55,198	9,465	8,331	6,639	79,633
Total.....	18,900,820	2,939,115	3,123,217*	2,972,259	27,935,411

* Revised.

The total ingot production of the country for year 1917 is estimated at 42,260,000 tons.

South Carolina's Handbook of the War.

Under the above title the South Carolina State Council of Defense has compiled an interesting handbook, giving a summary of the causes leading to the European War and those which brought the United States into the conflict; extracts of notable utterances by some of the leading men of the country on various phases of the war situation, together with statements by many leading citizens of South Carolina. The book is divided into three parts—"America and the World War," "The Voice of South Carolina" and "How You Can Help to Win the War."

The Cotton Movement.

In his report of October 5 Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight during 66 days of the season was 1,808,944 bales, a decrease under the same period last year of 742,677 bales. The exports were 918,629 bales, a decrease of 58,585 bales. The takings were, by Northern spinners, 293,158 bales, an increase of 12,191 bales; by Southern spinners, 575,010 bales, an increase of 32,974 bales.

Graham Furnace Blown In.

The Graham (Va.) furnace has been blown in by the Southeastern Iron Corporation, following the completion of improvements by Freyer & Co., contractors, Chicago. It has a daily capacity of 250 tons of iron.

Growing Demand for "Land Plaster."

F. A. WILDER, President and Manager Southern Gypsum Co., Inc., North Holston, Va.

I have been following with interest the discussion in your paper and elsewhere with reference to benefits of sulphur when used in connection with soils.

The last article by P. J. O'Gara, director of the agri-

cultural experiment station maintained by the American Smelting & Refining Co., is of unusual interest.

Dr. O'Gara says, after describing the bacteria that are active in connection with soils where sulphur is present: "It is these organisms that bring about the oxidation of sulphur to sulphates, in which form the sulphur is available to plants."

In this connection I would venture to call attention to the fact that gypsum is calcium sulphate, and the two gypsum mills of Southwest Virginia have shipped for agricultural purposes under the name of land plaster over 30,000 tons of finely-ground gypsum this year, and the demand is increasing.

We hand you under another cover a booklet called the "Use of Gypsum in Agriculture," which was prepared by a chemist in Germany for the German Gypsum Association. We are not very enthusiastic about Germans these days, but we must all admit their excellent chemical work and the thoroughness with which they have studied the soil problems and the remarkable results that they have secured in the way of soil productiveness.

We shall be glad to hand copies of this booklet to any of your readers who are interested, and have had requests for them coming to us from as far west as California.

Iron Furnace Site Offered.

D. A. ODEN, 929 First National Bank, Birmingham, Ala.

Can you put me in touch with parties likely to be come interested in proposition to build a blast furnace in this State on a tract of ore land roughly described as follows:

Acreage of ore, 1000; distance from railroad adjacent and back, 3 miles; thickness of ore bed, 18 to 36 inches; thickness of overlay, 4 to 16 inches; percentage of iron, 41.52; phosphorus, 1.77; silica, 16.73; alumina, 5.47; manganese, .8.

There are large lime deposits within 30 miles and several acres of pine timber available for charcoal. While this grade of ore does not seem attractive, the fact that it can be very cheaply mined, together with proximity of coal and lime, renders it possible to make iron cheaper than usual. The percentage of phosphorus, while not desirable in some grades of iron, is not objectionable in those grades used to make certain castings, such as stoves.

First Keel for United States Shipping Board.

McBRIDE & LAW, General Contractors, Beaumont, Tex.

As we laid the keel for our first hull on August 25, we claim the honor of having laid the first keel for the United States Shipping Board wooden fleet. We note in your issue of September 13 that the American Shipbuilding Co. at Brunswick, Ga., lays claim to having laid the first keel on August 31, which was six days after our keel had been laid.

Best Magazine Published.

M. M. SMITH, Orlando, Fla.

Herewith I am enclosing my check for \$4 for renewal of my subscription to the MANUFACTURERS RECORD.

I wish to state to you without qualification that, to my mind, the MANUFACTURERS RECORD is the best magazine published today.

Wants Substitute for Broom Corn.

S. E. DRISCOLL, Shiro, Tex.

I am desirous of finding out where I can get a substitute for broom corn. It doesn't matter where this stuff is grown, just so it is a substitute.

Potash Deposit Reported.

LOUIS SHERARD, Murphy, N. C.

I have located a large deposit of a substance which, if heated to 1200 degrees Fahrenheit, gives 20 per cent. potash salts and other sodas.

I wish to get it on the market or exploit it.

The Iron, Steel and Metal Trades

STEEL PLANTS FIXING PRICE DIFFERENTIALS.

Conferences Held to Determine New Schedules—Mills Are Unable to Quote—Iron and Steel Markets Very Quiet.

New York, October 8—[Special.]—Business in steel and iron last week continued to be of a negligible quantity. There was practically no demand for forward deliveries, and little for prompt. There is every reason to believe that before it becomes necessary for buyers to take hold in a large way all matters relative to prices will have been so adjusted that it will be easy to transact business. As all deliveries will be under regulation of the Priority Board, it is improbable that for the duration of the war there will be much buying for far forward deliveries.

The all-important question in the steel trade just now is that of price. While it is true that the "agreed" or so-called "fixed" price has determined the rate at which bars, shapes and plates may be sold at the mill, yet all other products, from ingots to finished steel, have had no price "fixed" as yet. Values are supposed to be adjusted in proportionate conformity to the three products named, and no doubt in time proper differentials will be determined. This will, however, take a considerable period to accomplish. Steel mills at Pittsburgh are now undertaking the work. They instituted a series of conferences last week at which it is hoped that a fair basis price will be arrived at for such products as wire, sheets, piping, etc., which go to make up the steel list based upon the price of bars, shapes and plates.

When the mills in conference arrive at a definite conclusion they will report to the War Industries Board with such recommendations as they think proper. When the board has passed upon them the ultimate prices will be announced.

There was considerable inquiry for bars, plates and shapes at the newly established market, but the mills are so tied up with Government and private contracts that little business resulted. It is conservatively estimated that the requirements of the Government and its Allies will engage about 30 per cent. of the steel capacity in 1918. In the year drawing to a close the Allies took about 15 per cent. Capacity has increased about 10 per cent.

The possibility that steel shipments cannot be made without a priority order has created considerable misapprehension in certain steel circles. It is understood, however, that a mill simply has to give priority to business for which there are priority orders. Whatever other tonnage is not thus engaged goes into other business at the will of the mill management. Both buyers and sellers are also interested as to what extent priority orders will accumulate so as to affect the carrying out of other business. As the orders are issued very suddenly, it is impossible to look very far ahead. It is pointed out, however, that while the system now inaugurated for priority is new, the giving of priority itself has been in operation for months.

It has developed that pig-iron prices recently fixed are not satisfactory to either the furnaces or buyers. They apply only to the valley district, and not to other districts, such as Eastern Pennsylvania, Buffalo, Cleveland, etc. These other districts in the past have averaged slightly higher prices than the valley district. The pig-iron committee is at work upon them, however, and will shortly place the results of their findings before the War Industries Board, which will formally determine and announce them.

Unlike the producers of copper and steel, pig-iron furnaces are not hampered by instructions to make no deliveries pending the satisfaction of Government requirements. Old contracts also hold good, so that practically all the iron now going forward for consumption is at prices higher than the established basis of \$33. A few sales of foundry grades were made last week at this price, but business generally was very quiet.

Furnaces are well booked for the balance of the year, and are not in a position to undertake new engagements at any price. The same relative situation should also hold true as to consumers, who are supposed to be comfortably provided for up to January 1. The demand for iron, however, has increased beyond expectation,

and would no doubt result in an active buying movement on the basis of the low-price agreement if the iron was to be secured. Until they are able to settle their obligations, however, the furnaces refuse to quote. As to next year the price is not fixed, so that nothing can be done in the way of deliveries beyond January 1.

The entire pig-iron market is upset, and no business can be expected until terms are definitely established, and this task promises to take some time. All prices quoted below, except those which apply to No. 2 and basic, are nominal. In other words, they do not exist. They do not represent the actual market, and are only given as a guide.

(Dealers' average buying prices for gross tons.)

Bessemer billets (nominal).....	\$65.00	— \$75.00
Open-hearth billets (nominal).....	65.00	— 75.00
Open-hearth sheet bars.....	75.00	—
Bessemer sheet bars (nominal).....	75.00	—
Forging billets.....	115.00	— 125.00
Wire rods.....	90.00	—
Rails.....	75.00	— 80.00

(Dealers' average buying prices for pound lots.)

Tank plates.....	\$3.25*	—
Refined iron bars.....	4.75	—
Steel hoops.....	5.00	— \$5.50
Cold-rolled strip steel.....	9.00	— 9.50
Sheets, No. 28 gauge.....	8.00	— 9.00
Galvanized sheets.....	9.50	— 10.00
Blue annealed sheets.....	8.00	— 8.50
Wire nails.....	4.00	—
Flat nails.....	4.00	—
Plain fence wire, base.....	3.95	—
Barb wire, galvanized.....	4.85	—
Railroad spikes.....	5.00	— 7.50

PIG-IRON.

Bessemer, Pittsburgh.....	\$37.25*	nominal
No. 2 foundry.....	33.50*	—
Basic, valley.....	33.50*	—
Basic, Philadelphia.....	33.75*	nominal
No. 2 foundry, Northern.....	33.75*	nominal
Low phosphorus.....	—	—
No. 2 foundry, Buffalo.....	32.00*	nominal
No. 2 South, Cincinnati.....	49.00	— \$52.90
Northern foundry, No. 2 Cleveland.....	54.30	— 55.30
Foundry, Chicago furnace.....	55.00	—
Malleable, Chicago furnace.....	55.00	—
No. 2 foundry, New York.....	33.75*	nominal
No. 2 plain, New York.....	33.25*	nominal

SCRAP-IRON AND STEEL.

Heavy melting steel.....	\$28.00	— \$32.00
Bundled sheet.....	21.00	— 24.00
Re-rolled rails.....	35.00	— 37.00
Old iron car wheels.....	30.00	— 31.00
Old steel wheels.....	35.00	— 36.00
Stove plate.....	16.00	— 19.00
Steel car axles.....	35.00	— 40.00
Iron car axles.....	40.00	— 45.00
Low phosphorus.....	42.00	— 45.00
Heavy cast.....	25.00	— 28.00
No. 1 cast scrap.....	25.00	— 29.00
No. 1 railroad wrought.....	20.00	— 22.00
Cast borings.....	19.00	— 21.00
Machine-shop turnings.....	19.00	— 21.00
Railroad malleable.....	26.00	— 27.00

*Agreed price. †Subject to revision.

THE WEEK'S PRICES.

	Copper.		Lead.			
	Lake.	Electrolytic.	A. S. & R. C.	Independent.	Spelter.	Tin.
Monday, October 1.....	*No quotations.	*No quotations.	8.00	8.00	— 8.27½	61.00
Tuesday, October 2.....	*No quotations.	*No quotations.	8.00	8.00	8.27½—8.27½	60.75
Wednesday, October 3.....	*No quotations.	*No quotations.	8.00	8.00	8.17½—8.30	60.87½
Thursday, October 4.....	*No quotations.	*No quotations.	8.00	8.00	8.17½—8.30	60.75
Friday, October 5.....	*No quotations.	*No quotations.	8.00	8.00	8.17½—8.30	60.75

*Government price, 23.50.

Quiet Market at Birmingham.

Birmingham, Ala., October 6—[Special.]—Inquiries have been quite numerous of late as to iron, and there are indications that a large quantity will be needed next year. The contracts in hand warrant a steady production and delivery. Home consumption shows no falling off. Cast-iron pipe makers are melting as much as before, though the pipe market is far from being settled. Demand is fairly good yet, but prices are off. Foundries and machine shops are very busy. There are more men at work in foundries and machine shops than ever before, and some of the plants are not only working double time, but on Sundays besides.

Coke is a little more plentiful, and is not a disturbing element in the production of pig-iron. The coal production in the last two weeks in the Birmingham field has been most satisfactory. The recent revision in the prices f. o. b. mines is appreciated by the operators, and the prospects are that there will be plenty of business if there is no recurrence of labor disputes.

Gossip prevails at Anniston that plans are in hand for a merger of the interests of the Anniston Steel Co., the Anniston Metallurgical Co., the Southern Munitions Corporation and the Southern Manganese Corporation. The merger will be known as the Anniston Steel Prod-

QUIET CONDITIONS IN METAL MARKETS.

Copper Situation Becomes Serious—Lead Prices Hold in Dull Market—Spelter Easier. Tin Active.

New York, October 9—[Special.]—A serious condition developed in the metal markets last week, especially relative to copper. If present lines are held out, and no copper is freed for distribution on authority of the Government, there may be a general closing down of manufacturing plants for want of raw material. The shutting down of large manufacturing plants would mean the dispersion of labor, the non-fulfillment of contracts, and general financial loss. The Government orders are peremptory, however, and producers are in a quandary. They are naturally anxious to help their customers, but do not dare to disobey the Government.

As an illustration of the exigencies of certain consumers, a large brass manufacturer informed the correspondent that he had offered as high as 34 cents a pound for copper to a producer who had the metal, and who would have been glad to sell it at such a handsome profit. The offer, however, was declined.

The demand for the red metal was quite general last week, and many large consumers endeavored in every way possible to cover their present requirements. The question of price is a matter so secondary as to be hardly worth considering when measured with the serious consequences of a dearth of copper. Several conferences between producers and consumers were held last week with a view of possibly bridging over the difficulty, but so far as can be ascertained, nothing satisfactory has been accomplished.

The lead market grew quiet again last week. It may have been influenced in a way by the position of copper. There was plenty of lead to be had for the buying, and there are no restrictions on making deliveries. With this knowledge, and that they can get the lead in any quantity, and at the same price as the Government is now paying for it, buyers were not anxious to enter the market, and demand was consequently light.

There was little demand for spelter last week, and the statistical position grew weaker. The market is laboring under the disadvantages of large stocks, a small demand and the uncertainty of the Government's requirements.

There was more activity shown in tin last week than has been apparent for some time, and the market assumed a firmer tone. There was a scarcity of actual spot Banca tin.

Stocks arrived in port from October 1 are 175 tons and stocks afloat are 5000 tons. For the month of September 5402 tons arrived at Atlantic and Pacific ports, as against 3270 tons in the same months of 1916.

acts Co. The properties of the Anniston Ordnance Co. will be purchased. Theodore Swann, president of the Anniston Steel Co., has been in New York for the past week and more, and the understanding is that he is working out the details of the merger. The Alabama Power Co. is parent organization in these concerns.

The scrap iron and steel and old material market is unsettled, and dealers are only able to quote prices for the time being. There have been some declines in quotations in the last few days, and in some quarters it is stated that consumers are making prices for some products. There is plenty of stock on the yards of dealers here. Consumers of scrap are asking delivery on old contracts, and where there are no contracts are not anxious to make any for a period ahead. Transportation for scrap is still a little slow, but so far as can be learned, no consumer has suffered inconvenience because of inability to get the product. The activity at the steel works throughout the Birmingham district and in the South warrants the assertion that there will be need for a large quantity of scrap iron and steel right along. The apprehension among the dealers is that the prices to be paid by consumers will not permit of profit, anyhow like that which might be expected in these times. Heavy melting steel, the popular scrap product, is among those showing weakness, and lower prices for

the commodity are noted. Stove plate and shop turnings both lost strength the past week, with but little hope of recovering for a while at least.

Quotations are given as follows:

PIG-IRON.	
No. 2 foundry.....	\$33.00
OLD MATERIAL.	
Old steel axles.....	\$32.00 to \$33.00
Old steel rails.....	24.00 to 25.00
No. 1 wrought.....	25.00 to 26.00
Heavy melting steel.....	20.00 to 21.00
No. 1 machinery.....	22.50 to 23.50
Car wheels.....	23.00 to 24.00
Tramcar wheels.....	20.00 to 21.00
Stove plate.....	17.00 to 18.00
Shop turnings.....	11.00 to 12.00

RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

SOUTHERN'S RECORD YEAR.

Over \$81,000,000 Gross Revenue and \$3,000,000 Balance Over Charges.

President Fairfax Harrison of the Southern Railway Co. submitted its annual report to the annual meeting of stockholders held at Richmond, Va., on Tuesday of this week. In the report, he says:

"It has been a record year. The volume of revenue, of expenses and of income, as well as the extent of improvements and betterments carried through, all reached new high levels, reflecting the good and the evil of the prosperity which has come to the South. Expanding business has brought in large returns, but it has set higher than ever before, and perhaps higher than is economically warranted, the standards of expenses. Nevertheless, until business shall again contract it would seem that the South may be expected still to prosper."

Total revenues were \$81,388,324.97, an increase of 14.46 per cent. over the previous year. Of this there remained, after paying out 70.10 per cent. for the expenses of operation and taxes, a net operating income of \$24,331,453.30. This is equivalent to 5.97 per cent. earned upon the property investment of the company, which is now \$407,688,151.71. The final balance of corporate income over charges was \$12,360,161.11, a sum which exceeded by \$3,026,262.50 the like balance of last year and the previous record. This income balance has enabled the company to spend during the year \$10,418,687.60 for additions and betterments to and upon the property over and above the proceeds of the Atlanta & Charlotte Air Line bonds which are being applied on double-track construction.

The property has been well maintained; its physical condition was never better. The roadway destroyed by storms and floods a year ago was restored, and the entire cost of reconstruction was charged to maintenance.

Except as affected by varying crop, local and temporary conditions, which caused this year a loss of certain traffic, principally perishables, there was a substantial, steady and uniform increase of every class of traffic. Through the location of numerous military camps within the South, the system has engaged, and for some may be expected to continue to engage, increasingly in the transportation of supplies for account of the Government. Independent of this, the business conditions in the South warrant the expectation of a healthy growth of traffic.

During the year there were completed 787 new manufacturing plants in the territory served by the Southern Railway System and associated lines representing a total capital of \$44,585,280. Additions were made to existing plants at a cost of \$17,111,370, and there were 89 new plants under construction on June 30, 1917, with a total capital of \$18,396,500. The cotton manufacturing industry continued to grow, and the consumption of cotton in Southern mills during the 12 months ended July 31, 1917, exceeded that in the mills of all other States by 1,001,628 bales.

Of the 649 miles of main line between Washington, D. C., and Atlanta, Ga., 521 miles are now double-track on improved alignment and grades, and the work is progressing on the remaining 128 miles. The i-

complete work is south of Charlotte, N. C. The Southern Railway now operates a total of 820 miles of double-track line.

At the annual meeting Augustus D. Juilliard and Jackson E. Reynolds, both of New York, were elected members of the board of directors to fill existing vacancies.

LIBERAL FOR MAINTENANCE.

Southern Railway System Also Spending Large Sums to Improve Facilities.

That large expenditures continue to be made for the improvement of railroad facilities is shown by the statement of the Southern Railway Co. for August, which says that \$1,507,647 were spent in that month this year, as compared with only \$1,178,006 in August, 1916. For July and August, 1917, the total expenditures of the company for such improvements were \$3,001,888, as compared with \$2,163,249 during the same period of last year.

The gross revenue of the system for August was \$7,853,628, increase as compared with the same month of last year \$1,556,918, or nearly 21 per cent.; operating expenses, taxes and uncollectible railway revenue \$5,796,200, increase \$1,244,692, or nearly 27½ per cent.; net income from operation, therefore, was \$2,057,428.

Gross revenue of the system for July and August, inclusive, was \$15,123,220, increase as compared with the same period of last year \$3,145,035, or 26¼ per cent.; operating expenses, taxes and uncollectible railway revenue \$11,183,600, increase \$2,432,453, or nearly 28 per cent.; leaving net operating income \$3,939,611.

In addition to its operating expenses, the Southern Railway is also spending large sums of money for the enlargement of its facilities, such as double-tracking, etc., so that it disbursed during August for labor, material, supplies and other purposes a total of \$8,402,015, of which \$7,041,911, or nearly 84 per cent., was paid to individuals in the South, this being \$1,544,371 more than the total amount paid to the company in the South for transportation services, or at the rate of \$1.28 distributed for each \$1 received.

Big Winter Rush to Florida Expected.

The Florida East Coast Railway is preparing to handle a very large passenger traffic this winter. It now has under construction at suitable points on its line a number of passing tracks, aggregating 13 miles in length, which will greatly facilitate the movement of trains. It is also getting new equipment, including 12 Pacific standard type locomotives, 9 steel passenger cars and 8 baggage cars. The road is gradually changing all its passenger train cars from wood to steel.

According to a report from Jacksonville, J. P. Beckwith, vice-president of the company, says it is probable that six through trains will be operated south from that city every day during the season, and according to every indication tourist travel to Florida this winter will be extremely heavy. The East Coast hotels are preparing to accommodate this rush, being, it is said, in better form than ever to handle the business.

A Texas Interurban Begins Construction.

The Dallas Southwestern Traction Co., which has just begun construction of an interurban railway from Dallas via Eagle Ford to Irving, Tex., 10 miles, plans to also build from Eagle Ford to Cleburne, Tex., 47 miles, making the main line 52 miles long from Dallas to Cleburne, for Irving is really on a branch of five miles from Eagle Ford, according to the company's plans. There will be two steel bridges erected, one of 200 feet and the other of 125 feet, with trestle approaches. The route lies through high, rolling prairie lands. The Creek Construction Co. of Sapulpa, Okla., is the contractor, and grading is in progress.

This new line will connect at Irving with the Rock Island and the Frisco systems at Mansfield with the Houston & Texas Central Railroad at Lillian with the International & Great Northern Railroad, and at Cleburne with the Gulf, Colorado & Santa Fe Railway and the Trinity & Brazos Valley Railway.

E. P. Turner is president and general manager; C. B.

Gillespie, treasurer, and Jno. T. Witt, chief engineer, 304 Gaston Building, Commerce and Lamar streets, Dallas, Tex.

Bondholders to Reorganize Nashville-Gallatin Railway.

The Union Traction Co., capital stock \$300,000, has applied for a charter at Nashville, Tenn., and proposes to take over and operate the Nashville-Gallatin Interurban Railway, which was bought recently at receiver's sale by the bondholders. The receivership was created December 22, 1916, the receivers appointed being H. H. Corson and J. R. West. The incorporators of the new company are H. H. Corson, John A. Bell, W. G. Simmons, J. H. Reeves and Guilford Dudley.

This line is 27 miles long from Nashville to Gallatin, Tenn., including nearly 4½ miles operated under a trackage arrangement. Entrance to Nashville is over the line of the Nashville Railway & Light Co.

Plans for an extension from Edenwold to Springfield, Tenn., nearly 18½ miles, have been under consideration for some time.

Western Maryland Net Earnings Decreased by Large Expenses.

The statement of the Western Maryland Railway for August shows revenues amounting to \$1,205,504; increase as compared with the same month of last year, \$132,939; total expenses, \$817,592; increase, \$179,264; net revenue, \$387,912; decrease, \$46,325; operating income after taxes, \$351,412; decrease, \$46,025.

The figures for the first eight months of the current year to August 31 show: Total revenues, \$8,733,444; increase as compared with the corresponding period of last year, \$1,166,639; total expenses, \$6,230,943; increase, \$1,460,695; net revenue, \$2,502,500; decrease, \$294,056; operating income after taxes, \$2,210,500; decrease, \$327,716.

New Equipment.

Illinois Central Railroad is reported contemplating orders for 85 locomotives, 3500 freight cars and 60 passenger cars.

Western Maryland Railway, it is stated, will not purchase any cars at present. This refers to a recent report that the company was in the market for 1000 freight cars.

Yazoo City (Miss.) municipal street railway contemplates the purchase of 4 cars. J. S. Butler is manager.

Changes in Street Railway Officials.

George H. Waring has resigned as vice-president and general manager of the Charleston Consolidated Railway & Lighting Co., Charleston, S. C., to become manager for the American Public Utilities Co. at Salt Lake City, Utah. C. M. Benedict, assistant secretary and treasurer of the Charleston Consolidated Railway & Lighting Co., has also been elected to the position of vice-president, and will have charge of the operation of the system, discharging the duties of general manager, as the latter post has been abolished.

Narrow-Gauge Road Sold.

The Mt. Airy & Eastern Railroad, according to a report from Mt. Airy, N. C., has been sold to H. L. Light of Washington, D. C., for \$16,000, and it is stated that operation will be resumed soon under a new charter. The line is narrow gauge, 19 miles long, from Mt. Airy to Kibler, Va. Sidney Bieber of Washington is president, and N. W. Machen, secretary. It is further stated that the property of the Rosslyn Lumber Co., which was interested in the railroad, was also sold for \$64,000.

Resuming Construction of Locomotives.

Having completed its contracts for munitions that were being manufactured at its Richmond (Va.) branch, the American Locomotive Co. of New York has not

taken any additional munition contracts because of the heavy requirements for locomotives both by the United States Government and its allies and our domestic railway companies. The Richmond plant is now being restored to locomotive work, and the company expects to resume shipping its engines in December.

Official Change.

J. L. Lancaster, receiver and president of the Texas & Pacific Railway, has been elected president of the Trans-Mississippi Terminal Railroad Co., according to a report from New Orleans, which further says that he succeeds J. A. Shephard, who resigned as president and general manager on October 3. The general managership was abolished.

Signal System Ordered.

The Norfolk & Western Railway is about to install a signal system on its electrified division near Welch, W. Va. Contracts for the necessary material have been awarded, and the work will begin immediately under the direction of J. E. Crawford, chief engineer.

Good Roads and Streets

SOUTHERN HIGHWAY ACTIVITIES.

Details in regard to road and street undertakings and bond issues, briefly mentioned below, are given under the proper headings in our "Construction Department" and "New Securities," published elsewhere in this issue.

Bonds Voted.

Ardmore, Okla.—City authorized \$21,500 bonds to improve streets.
Darien, Ga.—McIntosh county will issue \$55,000 road bonds, etc.
New Kent, Va.—New Kent county will issue \$50,000 bonds to improve automobile highway.
Perry, Fla.—City voted \$90,000 bonds to pave streets.

Bonds to Be Voted.

Charleston, S. C.—Charleston county will vote on \$275,000 bonds to improve roads, etc.
Colorado, Tex.—Mitchell county votes November 1 on \$75,000 bonds for road construction.
El Paso, Tex.—City votes October 31 on \$100,000 bonds to pave street and alley intersections.
Geneva, Ala.—Geneva county will vote on \$100,000 bonds to improve, repair and extend 100 miles of roads.
Hugo, Okla.—Choctaw county votes October 13 on \$50,000 bonds to improve roads.
Miami, Fla.—Ottawa county votes November 20 on \$350,000 bonds to improve roads.
Tulsa, Okla.—Tulsa county will vote on \$1,500,000 bonds to improve roads.

Contracts Awarded.

Cleveland, Tenn.—City awarded \$72,130 paving contract.
Huntington, W. Va.—City awarded \$27,679.10 paving contracts.
Louisburg, N. C.—City awarded \$135,000 paving contract.
Miami Beach, Fla.—City awarded \$5480.50 contract for road construction.

Contracts to Be Awarded.

Ada, Okla.—City plans additional residence district paving to cost \$100,000.
Baltimore, Md.—City plans \$1,000,000 expenditure for paving during 1918.
Blountville, Tenn.—Sullivan county appropriated \$1500 to macadamize road.
Bristow, Okla.—City plans street and paving improvements to cost \$75,000.
Clairemont, Tex.—Kent county has \$110,000 available for dirt-road construction.

Clarksville, Ark.—Johnson county will construct macadam road estimated to cost \$140,000.

Dyersburg, Tenn.—Dyer county will expend \$250,000 for constructing 24 miles of highway.

Gadsden, Ala.—City will expend \$41,000 for street paving.

Helena, Ark.—Philips county will construct 6 miles of road; cost \$140,986.94.

Joplin, Mo.—City will expend \$4106 for street improvements.

Kinston, N. C.—Lenoir county will construct 2 miles of concrete on Central Highway; estimated cost \$33,000.

Lewisville, Ark.—Lafayette county will construct 22 miles of gravel road; estimated cost \$100,000.

Little Rock, Ark.—City will expend \$100,000 for street paving.

Morristown, Tenn.—City will improve several streets; 5000 cubic yards excavation; 7000 square feet water-bound macadam; 7800 linear feet curb and gutter; 34,530 square feet sidewalk, etc.

Pikeville, Ky.—City will pave streets; cost \$30,000.

Wentworth, N. C.—Rockingham county will pave and otherwise improve 12.1 miles of road.

Dixie Highway to Demonstrate Efficiency of Good Roads vs. Railroads in Army Movements.

Chattanooga, Tenn., October 3—[Special.]—A forceful demonstration of the value to the nation of a system of military highways connecting the supply bases with the military cantonments will be made Thursday, October 11, when six two-ton motor trucks laden with Government supplies for the supply depot of the post quartermaster at Fort Oglethorpe, Ga., will leave the warehouse of the depot quartermaster at Atlanta for the 115-mile trip over the Dixie Highway. At the same time a test will be made in the transportation of infantrymen, when a specially-constructed high-powered passenger truck, built according to specifications of Major-General Leonard Wood, will transport 16 soldiers from Fort McPherson to Fort Oglethorpe, together with their guns, ammunition and full marching equipment. The outcome of the test is being watched with the greatest interest by army officers, particularly those in the supply and transportation department. Major R. B. Powers, U. S. Q. M. C., post quartermaster at Atlanta, assisted by Capt. A. T. Dalton, U. S. Q. M. C., post quartermaster at Fort Oglethorpe, will prepare data as to the time required and the cost of making a similar shipment by rail. Official observers will compile data relative to the time required in loading, transporting and unloading the supplies, road conditions and detailed costs of gasoline, oil, depreciation, etc., on the trip. The Dixie Highway Association, the Georgia State Automobile Association, the Chattanooga and Atlanta automobile clubs are giving every co-operation in obtaining the information desired. A large escort of cars from the Chattanooga and Atlanta clubs will be on the road during the day. As the trucks and escorts will be equally divided between the Dalton and the Rome routes, the counties through which the highway passes are hard at work making all of the improvements possible in order that their road may make a good showing in the test.

With good weather conditions, when the highway between Atlanta and Fort Oglethorpe will approximate those of an all weather military road, it is confidently expected that from 12 to 24 hours will be cut off the time ordinarily required in making this shipment by train. It is likewise felt that a saving in cost may be had when comparison between rail and truck costs is made, particularly in view of the fact that the motor truck can load, transport and unload at destination without the necessity of a double transfer from truck to train. However, the saving in time will be the most important item of consideration to the Government at the present time.

The Secretary of War and Major-General Leonard Wood, in letters to Judge M. M. Allison, president of the Dixie Highway Association, have called attention to the high patriotic service the citizens of the counties can perform in the construction of important links of the Dixie Highway so as to make it available for military service. It is pointed out that even where the highway is used for commercial purposes, the service to

the nation in providing roads which can be used for this purpose is just as valuable, as it releases much-needed freight cars for the longer hauls, and enables business, which might otherwise be compelled to suspend on account of freight-car shortage, to continue at a closer approach to normal.

Florida Leads in Per Capita Expenditures for Road Improvements.

Jacksonville, Fla., October 6—[Special.]—According to Chairman Ed. Scott of the State Road Department, who has just completed a thorough and comprehensive article upon the road improvements in Florida, the State outranks all other States in the Union in expenditures per capita for road improvements. In February, 1917, there were bond issues for road improvements in Florida amounting to \$17,566,200, covering an area of two-thirds of the State. Since then additional bonds have been voted and new work either has been or soon will be let to contract.

The following table will give some idea as to the road improvement work in the State for this year:

Area of Florida, 54,861 square miles.
Area not bonded, 32 per cent., or 17,741 square miles.
Area bonded, 68 per cent., or 37,290 square miles, or 22,755,800 acres. Bond issue of \$17,566,200 over 25,756,899 acres, 74 cents per acre.
Upon the completion of the foregoing work Florida will have—
Hard-surfaced roads, 3112 miles.
Semi-hard-surfaced roads, 1944 miles.
Graded roads, 4158 miles.
Total improved roads, 9224 miles.
Beginning January 1, 1918, the State Road Department will supervise the construction and maintenance of roads under the Federal aid and State levy act....\$326,000
Automobile license tax.....200,000
Total\$526,000

The use by the Road Department of 300 State convicts will also come available with the new year, and the department plans now to build a paved highway from Jacksonville to Tampa through the cities of Green Cove Springs, De Land, Orlando and Palatka, which will be known as the St. Johns River Scenic Route, and a similar road from Jacksonville to Pensacola, which will be known as the National Highway.

Corpus Christi Completing Big Paving Plan.

Corpus Christi, Tex., October 6—[Special.]—Within another few weeks Corpus Christi will complete what municipal authorities declare to be the most pretentious paving program undertaken by a Southern city of a population the size of Corpus Christi.

Working under the plan of the city paying one-fourth of the cost and the abutting property-owners three-fourths, the city in 1912 voted \$150,000 for its share of the work; again in 1914 it voted \$50,000 for similar purposes, and in 1916 voted a third issue that amounted to \$100,000, making a total of \$300,000 that Corpus Christi has spent within the last four years for street paving.

Approximately 12 miles, or 200 city blocks, have been paved and additional curbing built and storm sewer constructed on all of the paved streets, and practically all street railway lines reconstructed, making a total improvement outlay of approximately \$1,250,000.

The first paving started when Roy Miller took the office of Mayor, in 1914, and both Mr. Miller and other members of the Council are immensely gratified at the improvement that has been made. All of the paving has been of similar character, the Texas Bitulithic Co. having secured the entire contract.

In addition, Corpus Christi is now completing what is known as the bluff improvement; building concrete balustrades, retaining walls and terracing that property located between the bluff, which is 15 feet above sea level, and the beach portion of the city.

\$1,000,000 for New Paving.

An expenditure of \$1,000,000 for paving during 1918 is planned by the Paving Commission of Baltimore. The improvements will provide for from 25 to 30 miles of new pavement, principally sheet asphalt, on 85 streets and 30 alleys. A list naming the streets has been prepared, and engineers will prepare specifications with a view to having construction proposals invited early in the new year.

MINING

[A complete record of new mining developments and enterprises in the South will be found in the Construction Department.]

BIG KENTUCKY COAL DEVELOPMENT.

United States Coal & Coke Co. Plans for Its \$3,000,000 Mining Enterprise.

Many details have been determined for the recently announced \$3,000,000 coal development which the United States Coal & Coke Co. (subsidiary of the United States Steel Corporation) of Gary, W. Va., will undertake in Harlan and Letcher counties, Kentucky. This enterprise was outlined in August, when the company's chief engineer, Howard N. Eavenson of Gary, wired the MANUFACTURERS RECORD that 20,000 acres of coal land will be developed to a daily capacity of 10,000 tons of coal, all the equipment to be driven by electric power and the town development alone to cost \$1,900,000.

Preliminary construction is now in progress, and lumber costing \$25,000 has been received for temporary buildings, while lumber costing \$125,000 has been ordered for permanent structures, which will include 160 eight-room dwellings for miners. The contracts do not include doors, windows, shingles, hardware, plaster, electric-lighting materials and other minor supplies. The temporary commissary building, 240 feet long by 60 feet wide, is now being erected, and the permanent structure will be of brick construction, costing from \$100,000 to \$125,000. Tents and rough shacks have been provided for about 1000 workmen who are being engaged for the construction planned. Work has already begun upon 20 miles of railway siding, the contractor being W. J. Weakland, who already has 20 carloads of equipment at Benham, Ky., near the mining townsite.

The town development plans provide for the construction of such public utilities as an electric-lighting plant, water-works and sewer system, together with comfortable and convenient homes for the employees. Schools, churches, theaters, clubhouses, restaurants, hotels and other buildings will also be erected. The company's acreage is largely covered with hardwood timber, and sawmills are being installed to manufacture the lumber necessary for town and mine construction. There will also be brick works established and quarrying equipments installed for cutting the native stone, the product of these plants also to be used for town construction.

It is reported that the purchase price of the property to be developed was \$1,750,000. The mining activities are within two miles of Benham, on the Black Mountain extension of the Louisville & Nashville Railway, and the general offices will be located at Poor Fork, Harlan county, Ky., where the United States corporation has leased an acre of land for this purpose. This location is also within 130 miles of Knoxville, Tenn., and the coal acreage is adjacent to the big developments of the Wisconsin Steel Co. (subsidiary of the National Harvester Co.), which has invested several million dollars for its Kentucky coal plant.

The United States Coal & Coke Co. expects to begin shipments of coal to the extent of 400 carloads daily within the next 15 months, this output to be forwarded to its coke ovens at Gary, Ind., South Chicago and Joliet, Ill. There will be 10 mining plants installed, and from 2500 to 3000 miners will be employed when the full capacity is attained.

Another big coal land development is planned by the United States Coal & Coke Co. in Mingo and Logan counties, West Virginia, where it has purchased 50,000 acres of coal land from the United Thacker Coal & Coke Co. This purchase has been pending for some months, and the filing of court deeds indicates that several million dollars is the price paid. The big acreage has been prospected and samples of coal from the various creeks have been given laboratory tests, this coal being taken from entries which were driven from 75 to 100 feet deep. It is understood that the management of the United States corporation will give immediate attention to formulating plans for this development, so that details can be determined for opening mines, building towns and providing the other necessary facilities for an extensive coal-producing plant. Probably several million dollars will be invested for this work, and the general details may soon be announced.

New Alabama Graphite Development.

Crushing machinery, rolls, 200-horse-power boiler, 150-horse-power engine, bolting machine, pumps, hoists, mining and other equipment costing \$60,000 will be installed by the Keystone Graphite Co. of Ashland, Ala., which has been incorporated with a capitalization of \$150,000. This company will develop 151 acres of graphite land, and plans a daily output of 150 tons of ore, bids for the machinery to be opened on November 1. It has elected officers as follows: W. W. Bromelsick, president; A. A. Allen, vice-president; A. V. Calkins, secretary; W. A. Kitchens, treasurer; A. S. Furtwangler, manager. R. E. Meade & Co. are the construction engineers.

For Large Daily Coal Tonnage.

One thousand or more is the daily coal tonnage contemplated by the Grapevine Coal Co. of Madisonville, Ky. This corporation has 326 acres of coal land for development, and is now ready to receive data with prices on complete equipment for a coal-mining plant. Electric power is preferred, but steam power will be considered.

Officers have been elected as follows: R. E. Cooper, president, Hopkinsville, Ky.; C. H. Murphy, vice-president; Frank G. Wake, secretary-treasurer; W. S. Elkin, manager; each of Madisonville, Ky.

Piedmont Copper Mines.

Virginia copper property will be developed by the Piedmont Copper Mines Corporation, Virgilina, Va., which has been incorporated with a capitalization of \$200,000 and the following officers: Richard B. Washington, president; G. Washington Lewis, secretary; both of Alexandria, Va.

TEXTILES

New and Enlarging Southern Mills.

During the third quarter of the year there were eight new cotton manufacturing enterprises announced, \$325,000 being the total capitalization of four of these companies. The other four companies have not made public the amount they will invest. Two established mills decided upon plans for adding 5740 spindles and 204 looms, requiring an investment of about \$150,000 for additional building construction and equipment of machinery. Three others plan enlargement, but have not stated details.

Two important news features of July, August and September are a \$400,000 increase of capital by a Virginia company contemplating the production of automobile fabrics and a \$200,000 expenditure for mill village improvements by a \$9,000,000 Virginia cotton mill corporation.

A brief summary of the announcements of the third quarter of 1917 is as follows:

Name.	Alabama.	Location.	Spindles.	Looms.
*Barker Cotton Mills.....	Prichard (dyehouse and bleaching plant).			
Georgia.				
Federal Prison.....	Atlanta			400
Royal Cotton Products Co.....	Atlanta (\$100,000 capital; product—padding materials)			
*Lafayette Cotton Mills.....	Lafayette		2,240	40
*Lawrenceville Yarn Mills.....	Lawrenceville (quadruple capacity)		2,240	40
North Carolina.				
Advance Manufacturing Co.....	Fayetteville (\$100,000 capital)			
R. Lee Mahaley.....	Shelby			24
Catherine Mills Co.....	Shelby			40
*St. Pauls Mills Co.....	St. Pauls (200-ft. addition)			
*Delgado Mills.....	Wilmington		3,500	100
South Carolina.				
Charleston Mills Co.....	Charleston (\$75,000 capital)			
Fort Prince Spinning Co.....	Wellford (\$50,000 capital)			
Texas.				
Texas Textile Co.....	Houston (absorbent cotton and artificial silk)			
Virginia.				
*Riverside & Dan River Cotton Mills.....	Danville (\$200,000 mill-village improvements)			
*Halifax Cotton Mills.....	South Boston (\$400,000 increase for contemplated production of automobile fabrics)			
			5,740	604
Total for first quarter of 1917.....			161,512	4,382
Total for second quarter of 1917.....			322,654	10,524
Total for third quarter of 1917.....			5,740	604
*Established mills increasing.				

Erlanger Mills' Addition.

Describing its new addition, the Erlanger Cotton Mills of Lexington, N. C., writes to the MANUFACTURERS RECORD: The general character of construction is brick side walls, with reinforced concrete floors and sills and steel sash throughout. This building is 130 feet long by 100 feet wide and complete with all machinery, electric apparatus, power plant, etc., it cost \$120,000. It was constructed by the Fiske-Carter Construction Co., Worcester, Mass., and Greenville, S. C., and contains 5000 ring spindles, equipped for cone, tube and skein winding.

The new plant is in operation, manufacturing No. 20s hosiery yarns. It was designed by J. E. Sirrine of Greenville, S. C. All the machinery is driven by individual motors, and the entire plant is equipped with every modern means of sanitation and devices for safeguarding operatives.

Surry Hosiery Mills.

Organization has been completed by the Surry Hosiery Mills of Mt. Airy, N. C., mentioned last week as capitalized at \$200,000. A building has been secured and 100 hosiery knitting machines have been ordered for the initial installation. Officers have been elected as follows: George O. Graves, president; G. C. Lovill and I. W. Barber, vice-presidents; L. C. Christman, secretary, treasurer and manager.

Will Manufacture Cotton Yarn.

Two-ply cotton yarn will be manufactured by the Liberty Spinning Co. of Shelby, N. C., which has been organized by C. G. Blanton, J. R. Moore and associates. This enterprise is capitalized at \$150,000, and the mill will be equipped with 5000 spindles. The improvements will include building 25 cottages, with electric light and water service.

To Establish Big Hosiery Mill.

A daily capacity of 500 dozen pairs of men's half-hose is planned for the Ideal Hosiery Mills at Maryville, Tenn. This company has been incorporated with a capitalization of \$50,000 by S. W. Duggan, T. H. Johnston, Jas. L. Getaz, Frank C. Howard, D. F. Donaldson and B. L. Glascock. The mill machinery has been ordered.

Hookworm in California.

In a report just issued by the Bureau of Mines, Department of the Interior, in co-operation with the California State Board of Health, it is stated that among 1440 miners of the Mother Lode district of California examined for hookworm infection, 444 miners were found to be infected and 91 miners have taken the treatment and gotten rid of the infection. The statement is made that 50 to 80 per cent. of those working in these mines are infected.

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MECHANICAL

A Small Tractor for Farmers.

A small tractor, adapted to the requirements of agriculturists in various parts of the country, is soon to be placed on the market, according to the plans of the Oliver Tractor Co. of Knoxville, Tenn., which has already built one of the machines, and the accompanying illustration shows it at work on its first plowing test in a piece of very hard shale clay land on which alfalfa had been grown for the last eight years. An officer of the company says there was a very heavy root and top growth, and the ground was very dry, being "as hard as an old brickyard." Furthermore, he writes: "When the picture was made we were plowing 10 inches deep and plowed all depths from 6 to 12 inches, with plenty of reserve power at all times. You can imagine how hard the ground was from the fact that the wooden pin that is supposed to hold the plow with three bases broke repeatedly before we could get two plows in the ground full depth. This machine is the most powerful for its size on the market."

The tractor is being made at present in the factory of the Wm. J. Oliver Manufacturing Co., but the tractor company organization is entirely separate, and the machine will be built in a plant devoted to tractor manufacture. E. Clyde Hammond is vice-president and general manager of the tractor company.

The picture displays the first "Model A" tractor brought out, but there will be some changes in its general appearance when the regular output begins, which is expected to be about January 1, 1918.

It is contemplated to make a special machine for the cane-grower, another for the cotton-grower, still another for the corn-belt farmer, a fourth for the vineyard and orchard man, and finally, one for general purposes. The company is working on two models, and expects to have them ready in a short time. It is aimed to sell them at reasonable prices by making them in quantities necessary to secure that end.

Farmers, to avail themselves of the use of one of the machines, are advised to prepare fields for tractor plowing, so as to avoid loss of time in turning. This means the removal of stumps and fast rock to not only prevent delay, but breakage of implements.

The specifications of the present Model A include the following items, among others: Motor, Buda, 4 cylinder, 4 cycle; bore, $4\frac{1}{4} \times 5\frac{1}{2}$ inches; magneto, Dixie high tension; impulse starter; governor, Pickering centrifugal; cooling system, centrifugal pump. Preflex radiator amply large for extreme conditions; clutch, Berg & Beck multiple disc, 12 inch; drive, two tracks 6 inches wide; 50 inches on the ground; 400 square inches of ground bearing area in contact; ground pressure, about 6 pounds per square inch; track shoes fitted with rocker joints, case-hardened and constructed so as to avoid the necessity of lubrication. The front wheels have a six-inch face, with one-inch skid bearings. Bearings, Hyatt roller throughout, including front wheels; length, 132 inches; height, 40 inches; width, 36 inches; center of gravity, 15 inches from the ground; speeds forward, $1\frac{1}{2}$, $2\frac{1}{2}$ and $3\frac{1}{2}$ miles per hour; reverse speed, $1\frac{1}{4}$ miles per hour; approximate weight, 5000 pounds. These specifications may be modified when desirable to obtain greater efficiency.

Two-Bearing Three-Unit Motor-Generator Sets.

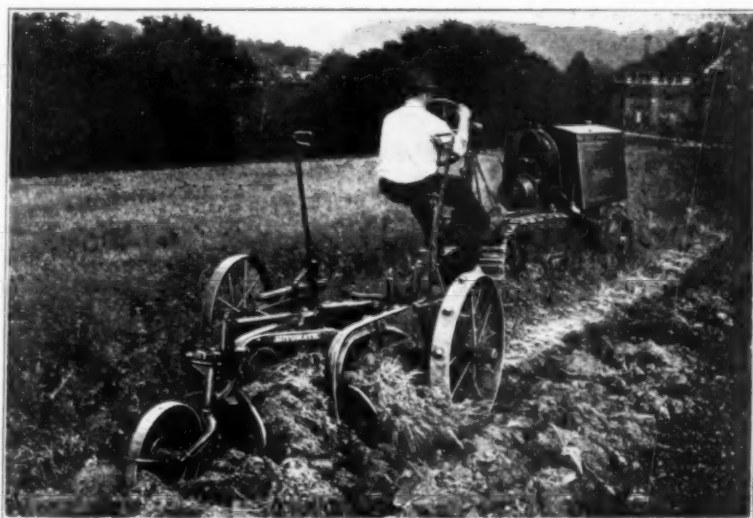
Two rubber manufacturing companies in Ohio have each recently installed two three-wire direct-current motor-generator sets that in construction are a departure from the usual practice. Instead of being of

the old four-bearing three-unit type, or the two-unit type with a three-wire generator as one of the units, these sets consist of three units with only two bearings.

The new sets were designed and built by the Crocker-Wheeler Company, Ampere, N. J., and consist of an 845 K. V. A. 2200-volt 60-cycle 3-phase synchronous motor driving two 250 K. V. A. 125-volt compound-wound interpole generators.

The use of three units results in greater unbalance overload capacity and greater flexibility of the direct-current voltage than is obtainable with a two-unit set having a three-wire generator as one of the units.

As compared with the old four-bearing three-unit construction, these two-bearing units are much simpler and have the following advantages: The absence of outboard bearings makes the brushes more accessible for adjustment, and the unit can be assembled, dis-



OLIVER, MODEL A, TRACTOR AT WORK.

mounted and cleaned more readily. Perfect bearing alignment can also be secured with greater ease, as self-aligning bearings are used. The machines can hence be erected with less labor. Because of the shorter length of the set, less floor space is required. Couplings, which in some cases constitute a weak link, are eliminated.

"Superior" Inside Corner Bead.

The "Superior" Inside Corner Bead, patented June 18, 1912, is designed to insure correct lines in plastered surfaces, where wall meets wall or ceiling, an artistic improvement that, in the average job of plastering, is much needed.

This bead, moreover, furnishes grounds for the mechanic to work to, thereby necessitating the application of an adequate coat of mortar over the lath and doing away with the common "skinning" of the mortar coat, especially from the jambs back to the inner angles of the walls.

Furthermore, from its construction, this bead in a



HOW THE BEAD LOOKS BEFORE APPLYING.

large degree takes up the strain of building settlement and the warping and shrinking of timbers, thus preventing the unsightly fissures which are commonly seen in the angles of a plastered room or radiating therefrom.

Of further importance, it affords a solution of one of the most irritating troubles—the joining of wood lath, metal lath, or plaster block partitions on brick or tile walls. By the use of a clip, which is furnished if desired at a small additional cost, either wing of the bead may be extended one and one-half inches, so as to afford ample nailing room, thus eliminating splintering or clipping.

"Superior" Inside Corner Bead is made from galvanized open-hearth sheets, and is furnished in 5, 6, 7, 8, 9, 10 and 12-foot lengths. Samples can be secured by writing the manufacturer, Milwaukee Corrugating Co., Milwaukee, Wis.

Completed \$300,000 Lumber Plant.

At a cost of \$300,000, the Keith Lumber Co. of Beaumont, Tex., has completed its plant and accompanying facilities at Voth, eight miles north of Beaumont, on the Santa Fe and Southern Pacific railways, replacing the plant which was burned last December. The new mill cost \$150,000 and is equipped with machinery for the following ten-hour capacity: 100,000 feet of yellow-pine lumber, 40,000 feet of hardwood lumber, 50,000 feet of laths and pickets. Its dry kiln and planer has a daily capacity of 100,000 feet each, with storage sheds for 3,000,000 feet of lumber. This plant occupies an area of 150 acres and employs about 300 men, forming an industrial city of 1000 inhabitants, who have been provided with public utilities, including water-works, sewerage system, electric-lighting plant and telephone service.

The company is cutting a 30,000-acre tract of virgin timber land to furnish the material for this lumber plant, and is purchasing additional properties for future operations. Its subsidiary, the Beaumont & Saratoga Transportation Co., operates a 25-mile tram railway, with extensive mill terminals, a standard-gauge railway connecting with the Santa Fe and Southern Pacific systems. Three locomotives and 100 cars transport logs to the mill pond and convey the woodsmen to and from the logging camps.

Textile Notes.

An annual dividend of 12 per cent. has been declared by the Bibb Manufacturing Co., which operates large cotton mills at Macon, Columbus, Reynolds and Porterdale, Ga. This corporation has also increased its capital stock from \$2,500,000 to \$3,000,000 by giving its stockholders new capital stock to the extent of 20 per cent. of their present holdings.

Construction is progressing upon the Valley Falls Manufacturing Co.'s additions at Spartanburg, S. C. These include a 107x79-foot mill extension of brick construction, a warehouse and several houses. The company is also remodeling its entire plant and installing electric power. It awarded its building contract to the Fisk-Carter Construction Co. of Greenville, S. C.

Jasper Miller of Charlotte, N. C., proposes to build a 10,000-spindle mill in connection with his recently announced plan for a \$300,000 cotton manufacturing and hydro-electric company at Springwood, Va. His water-power is estimated to develop 600 horse-power during three months and from 1500 to 2000 horse-power during nine months of the year. Plans include the construction of a model mill town, a plant and townsite of 100 acres having been secured on the James River and the Chesapeake & Ohio Railroad. The engineer is C. A. Mees of Charlotte.

E. S. Draper of Charlotte, N. C., has been engaged as landscape architect for mill village development and expansion planned by the Hermitage Cotton Mills of Camden, S. C.

Trading With Latin-America.

"Trading With Latin-America" is a book of 185 pages issued by the Irving National Bank of New York city. It is from the pen of Ernest B. Filsinger, and the foreword says: "The inducements which Latin-America offers to the American manufacturer and exporter are unusually attractive. Its geographical situation, its diversity of climate, people and products, the generally undeveloped condition of its industries, all mark it as the particular field in which national effort toward the extension of our foreign trade may find most proper expression. This volume has been produced in the hope that it may be helpful to our friends." The contents present information concerning solicitation of South American trade, the conduct of business when relations have been established, the necessary formalities, documents, etc.; in fact, a large amount of detailed instructions and advice which cannot be otherwise than useful to persons already engaged in commerce with Latin-America, and of great value to others about to engage in such business relations.

The Mediator states that the average year's pay of all American railroad employes is \$859, over double that of highest paid of European railway labor.

FOREIGN NEEDS

Cotton Machinery Wanted.

DEPARTMENT OF COMMERCE, Bureau Foreign and Domestic Commerce, 409 Custom-house, New York.

This office has received a visit from H. Medina, A., of Compania de Tejidos, Medellin, Colombia, who is to purchase spinning and weaving machinery. Mr. Medina will require: Fifty looms, vertical opener; automatic self-regulating hopper feeder; single scutcher; ring spinning frame for weft; double bobbin reels; upright spindle winding frame. Payment, one-third on placing order and two-thirds on receipt of goods. References: Antioquia Commercial Corporation and Mecke & Co., 44 Whitehall street, New York. Correspondence in Spanish or English. Mr. Medina will be in New York about one month and may be addressed at this office or care of Mecke & Co.

Antimony, Copper, Emery, Mica and Manganese.

F. VIOLA & Co., P. O. Box 140, Buenos Aires, Argentina

Among the products which Argentina is able to supply in large quantities are minerals, in which the country is rich, a fact unknown to foreign people, not even to those living in the Argentine Republic; they do not interest themselves enough to exploit them. Recently there has been a movement in the way of exporting mica to the United States, but the amount has been small, having regard to the valuable mines already discovered. We are now getting out the following mineral ores, and are in position to fill order: Wolfram, 65 to 67 per cent. pure; antimony, 63 to 65 per cent. pure; copper, 35 to 37 per cent. pure; manganese; emery; mica.

Paul Lechler's Spray Boxes.

A. SCHONFIELD & Co., 57 Hope St., Glasgow Scotland.

We have been informed that what was sold in this country as "Paul Lechler's Spray Boxes" were not manufactured in the country of the enemy. As our requirements of those spray boxes are large, make inquiries and let us know where they are made in your country and to whom we should apply for a quotation.

Scotland Needs Machinery and Tools.

A. SCHONFIELD & Co., 57 Hope St., Glasgow, Scotland.

We are interested in all machinery and tools in connection with the iron, agricultural and woodworking trades; shall be glad if you can secure agencies for us, to which a salary must be attached. The National Association of Manufacturers, New York, has a complete record of our firm. We are presently buyers of 10 tons soft brass sheets 12 inches wide and wider by .008 inch and thicker, and we shall be glad if you will ask makers to send us their quotations c. i. f. Liverpool, Glasgow or Newcastle-on-Tyne. Prices should be cabled, with earliest date of delivery. Our terms are net cash on presentation Commercial Bank of Scotland in Glasgow.

Glassware, Hardware, Paints, Steel Ware, Etc.

BLANCO HERMANOS, Barranquilla, Colombia, S. A.

Our business is conducted as representatives of a group of American manufacturers and our affairs are mostly in drugs, provisions, rubber goods and stationery. We are in position to handle two or three other houses, and are interested in hardwares, enamel steel wares, paints, varnish and glassware.

Iron and Tin Tubes, Etc.

HUERTA HERMANOS, 158 Santa Maria La Redonda, Mexico City.

I need certain products for manufacture of iron and tinware. I have put out orders for enamels and gal-

vanized wire for various purposes, still I would like to know some houses making tubing for iron bedsteads, as well as tubing of tin for other uses. Also I must find where to purchase wheels or rollers for beds. I used to get these goods from England, but under present circumstances that is impossible and wish to obtain them from the United States.

London Offers Soft Soap-Substitute.

BRITISH ORIENTAL TRADING Co. of Constantinople, 9 New Broad St., London, E. C., England.

Give me the names and addresses of firms interested in soft soap. Have acquired sale of excellent substitute (base palm oil), which I can offer at £18 10s. per ton of 2240 pounds net cash against documents in London, free on rail or alongside steamer in Liverpool. Export packing is extra, and price is subject to fluctuation of raw material.

Paper Milk Bottles Wanted.

KURI PRIMOS SUCS, Alejandro Kuri, Mexico City.

We have heard that a new invention of paper milk bottles is in use in the United States. It is entirely new, economic, cheap and practical. The milk is distributed in these bottles, which are thrown away after using. Let us know if that is true, and if you know the maker send us his address or suggest him to send his catalogue with prices.

Portugal Needs Electrical Equipment.

MAURA, GOMES, NETTO & Co., Lisbon, Portugal.

We are interested in electrical supplies and machinery; apparatus for electrical installation; material for lighting and illumination; motors for gas, gasoline and oil; tinsplate.

For Trade in Italy.

CHARLES F. HAUSS, Manager Mario Tapparelli Fu Pietro of America, 50 Church Street, New York.

To manufacturers who are anxious to be represented in Italy we offer not only our organization for selling and advertising, together with our corps of engineers, but since we purchase for our own account, we offer financial guarantees.

Chemicals, Cottons, Soaps and Woolens.

G. D. KATSIKIS, 60 Rue Puvie-De-Chavannes, Marseille, France.

Direct me to some manufacturers that would provide me with the following goods: Cotton cloth; cotton tissues and woolen ones; nails for building and for boots; soaps; chemical produce.

Fertilizer, Motor Parts, Oils, Textiles, Etc.

MENDEZ Y RODRIGUEZ, Sancti-Spiritus, Cuba.

We act as agents for manufacturers of gasoline, petroleum, lubricating oils, carbide, fertilizer, accessories and parts for automobiles, textiles of current types, porcelain and glassware.

Cotton and Semi-Worked Metals.

GIUSEPPE ITHEN, via Varducci 20, Milan, Italy.

I have gone through the MANUFACTURERS RECORD. It is certainly a splendid publication. I handle semi-worked metals as a side line, being chiefly occupied with the import of raw cotton.

Mexico Wants Yarn and Thread.

GUILLÉN BROS., 2A Aldama Num. 57, City of Mexico.

I wish to purchase yarn and threads of different kinds for making stockings and similar apparel. Put me in direct communication with the manufacturers themselves and have them send me samples and prices.

For Constantinople and Tributary Section.

EDGAR J. FRANKLIN, Agent of British Oriental Trading Co. of Constantinople, 9 New Broad Street, London, E. C., England.

I have accepted an offer of old Constantinople friends to collaborate with them in extending their business in Turkey and adjoining countries during the war, representing them here after peace has been concluded. Obtain us the agency of an alarm-clock manufacturer for the district of Constantinople. Should any of your subscribers have anything suitable for the near Eastern market, be good enough to recommend us as agents.

A Texas Plan for Increasing Food Production.

C. W. HAHN, Houston, Texas.

I have read with much interest from time to time your splendid articles on agricultural development of the South and increase of agricultural and live-stock production. It is useless to say that it is imperative that agriculture and live-stock production must be materially increased to meet the pressing and increasing needs of our Allies in war, besides our home consumption, and in order to accomplish this it will be necessary that a well-organized and persistent effort be made, and right now is the time to begin in order to make the necessary preparations for next year's crop. The agitation for increase of crops and live stock by the MANUFACTURERS RECORD and other publications has aroused some interest and an increased production will follow, but it will fall very short of the consumption for several years to come and until the necessary surplus shall again have been restored. I believe I can suggest a plan which will largely overcome the food and feed shortage that we are facing: I will not intrude upon your space to go into details, but will be glad to discuss or submit the full plan to interested parties. I know of several large bodies of land in South and Southwest Texas susceptible of a high state of productiveness, of from 500 to 100,000 acres each, that are accessible and in line for agricultural development where all the conditions for such development are far more favorable than in most other sections of the country. There are thousands of families in this country, who are good farmers, who would be glad to go upon these lands and would do so if they were financially able.

Very briefly, my plan is for the Government or any large financial concern or individual to buy 100,000 or any number of acres, lay it off in suitable farm-size tracts, put on the necessary improvements, such as house, barn, well and fence, then put on the farmer who has his own equipment. When he has his land in a good state of cultivation, then sell him the land on long time at a price to cover all costs, including interest. The details cover the absolute safeguarding of the money invested and interest, and the results under proper management will be to furnishing the Government with much needed food and feed; also, will furnish farm homes for thousands who are clamoring for country life, and last, but not least, the philanthropist who furnishes the money will be reimbursed with interest.

Increasing Production of White Sugar on Louisiana Plantations.

New Orleans, La., October 2—[Special.]—One of the old crystallizing houses, sometimes called a refinery, which has been crystallizing syrups of several small factories in the western end of the sugar belt and turning them into some 20,000 or 25,000 barrels of grocery sugar, has increased its capacity this year at least 60 per cent. and its capital stock has been more than doubled, being now \$250,000. Oscar Zenor, one of the most persistent advocates of raw sugar manufacture in the State, has gone into the operating company of the Franklin refinery at Franklin, La., and will have every pound of his sugar made into high-grade white crystals. Thirty-five thousand acres of reclaimed lands in the Lafourche Delta section are to be put into corn, which will bring about an increase of around 2,000,000 bushels in the corn crop of Louisiana.

Reclamation of considerable lowlands in Lafayette parish will add millions of dollars of fertile corn, cane and cotton lands to that parish.

Livestock from the drouth-stricken districts of Texas continues to come into Louisiana in great numbers.

LUMBER

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

STRONG MARKET FOR LUMBER EXPECTED TO CONTINUE.

No Let Down Anticipated Following Completion of Cantonments—Huge Demands Deemed Certain, Now and After War, on Account of European Requirements.

Washington, D. C., October 10—[Special.]—Southern lumbermen are not in the least perturbed by the fact that the vast amounts of lumber contracts which they have received from the Government for the construction of cantonments shortly will be curtailed.

The huge amounts of timber needed by the army and navy in the building of instruction camps has been supplied by the mills of the South with surprising speed, to the extent that actual construction in many of the camps is now nearly complete.

To the query, "What are you going to do now?" representatives of Southern lumber interests now in Washington answer with the question, "What did we do before we entered the war?" They have no hesitancy in saying that they anticipate no let down whatever in the Southern lumber business. The normal construction which was carried on before the war, they point out, was temporarily arrested by the sudden demand by the Government for large amounts of timber for cantonments and ships. As rapidly as these demands are supplied the normal trade demands will quickly take up the slack.

It is known also that several representative Southern lumbermen who have recently returned from Europe are firmly of the belief that all surplus lumber not used in the United States will have a ready market in France, England and other countries now at war with Germany. The requirements of the French Government alone, they believe, will be huge. The restoration of the devastated districts of France and Belgium, entirely aside from the heavy demands for timber used in military operations, will be far greater than is generally supposed, except by those who have made a study of the situation as it actually exists.

Although no official announcement has yet been made, it is believed certain that large stocks of lumber will be required also by this Government in the building of cantonments for the great American armies to be sent to France. In this connection a plan to build cantonment parts in this country and assemble them in France is now being considered by the War Department. Such a plan has many advantages, it is felt, the most notable of which would be rapid construction. When the building parts arrive at the cantonment sites in France they could be readily and quickly assembled and ready for the occupation of the American troops within a few days after arrival.

All demands from France, both for cantonment construction and the war purposes of the French armies, will be met as they arise. This will insure against cutting an oversupply of timber, and would prevent deterioration arising through the piling up of an unnecessary surplus.

Although it was recently reported that the Government intended establishing at Mobile a great lumber concentration yard, it is authoritatively stated here that this plan has been abandoned. The suggestions of practical lumbermen of the South were requested, and acting upon their advice, the War Department has practically decided that the plan would not be feasible.

A substitute plan has been suggested whereby the Government, instead of attempting to mobilize a large supply of lumber at Mobile or any other port, will try to accumulate medium stocks for war purposes at many of the most important shipping points. This will expedite the quick filling of rush orders, and also will permit the loading of a small quantity on any ships bound for Europe which may have surplus cargo space.

It is also felt that the meeting of foreign demands as they arise will insure against temporary tie-ups in the wooden shipbuilding program. This program, officials feel, is of the first importance, as the demand for ships, even after the war, will be enormous. The tremendous strain placed upon the steel market in meeting the demands for war supplies has caused the price of steel and

iron products to soar to unprecedented heights, and it is felt that wood will be used wherever possible, both in building in this country and for war purposes in Europe.

WOOD BEING REPLACED BY OTHER BUILDING MATERIALS.

The Facts and the Official Reasons Therefor.

Washington, D. C., October 4—[Special.]—Twenty-five years ago lumber was regarded as almost as much of a necessity as wheat, while today it is steadily being replaced by various substitutes, says a report by the Forest Service of the United States Department of Agriculture on "The Substitution of Other Materials for Wood." Disregarding the temporary effect of the war, with its sudden demand for lumber and its great enhancement of prices of many substitute materials, the report points out the tendency in the long run. Each year more steel, concrete, brick or tile is being used in places where lumber was formerly employed. This is particularly true in cities where enactment of building codes and the development of new forms of construction have created a demand for more durable building material. Shingles have given way largely to composition and tile roofings, wooden sidewalks have been almost wholly replaced by cement, while the modern skyscraper, with its steel framework, and stone, brick or tile walls, occupies the site of some former frame structure. Railroad cross-ties and mine props are about the only forms of wood which are not affected.

How hard this substitution has hit the lumber business is shown by the Government estimate that the total replacement of lumber in all forms of use is 8,090,000,000 board feet, or 21 per cent. of the lumber consumption of the United States in 1915. The rate of substitution seems to be increasing, and is now in excess of 500,000,000 board feet a year. Approximately 70 per cent. of the lumber cut goes into forms of use whose demands appear to be decreasing. Twenty per cent. more goes into strongly competitive fields. In the remaining 10 per cent. of wood uses there seems to be a much better opportunity for a larger consumption.

Increasing substitution has not, however, lowered lumber prices to the consumer, the report points out. On the contrary, they have steadily advanced, while the cost of many substitutes has decreased. Exhaustion of the stands of local timber and discovery of new sources for the manufacture of other building materials are given as some of the reasons for these changes. More than 75 per cent. of the replacement of wood, however, is made in spite of higher initial cost of the substitute.

The effect of the growing use of other materials has been to accentuate competition and decrease profits in the lumber business. As a result of this, and other reasons, alternate periods of curtailment and overproduction have made the lumber market unstable. This, in turn, has resulted to the disadvantage not only of the persons whose money is invested in timber and sawmills, but to the many hundred thousands who are dependent upon the lumber industry for their living.

Lumbermen have felt, it is said, the effect of the replacement of their product by other materials, but have not realized the extent to which it had taken place. They have failed to adopt aggressive selling methods and have been unable to supply the consumer with reliable information regarding lumber because they did not have it. A complicated system of grades is in use which is not intelligible to the average consumer and is even the subject of considerable dispute among lumbermen.

Manufacturers of other building material have spent large sums of money to obtain reliable information about their products. They have had to advertise extensively to make a place for themselves. Substitutes for lumber are guaranteed to meet specifications which are easily understood by the consumer. These facts, the report states, have combined to make the substitutes increasingly popular.

For lumbermen to hold their markets against competing materials, it will be necessary for them to learn more about the fundamental properties of wood, the author of the report says. They can do this either by scientific research for themselves or by co-operating with agencies already established. Better manufacturing and selling methods and the development of by-products should enable them to make a profit in spite of

the limitations on the prices of lumber which may be imposed by competing substitutes.

Even with the increasing substitution for wood, the report points out, there will be need for all the wood in the United States, and more. The total consumption of the country for many years has been far in excess of the growth. Already in many regions timber shortage and high prices have followed the exhaustion of the local supply. From the public standpoint there is a real need for growing forests vastly larger than are now planned for.

LUMBER MEN PLEDGE GOVERNMENT COMPLETE CO-OPERATION.

Georgia-Florida Sawmill Men's Association Members Personally Promise to Speed Up Work for Ship Timbers.

Jacksonville, Fla., October 6—[Special.]—An additional contract for 100,000 piling and 20,000,000 feet of Florida yellow pine lumber was accepted from the American International Company by the various mills composing the Georgia-Florida Sawmill Men's Association at a meeting held in Jacksonville on October 2, following addresses made by three prominent attorneys of this city and one of the largest sawmill operators in the South.

The meeting was called to arouse mill men into making a supreme effort to supply the Government with lumber, in accordance with their pledges of several weeks ago, to cut all the keel timber desired in certain schedules accepted, and to get out 15,000 piling and 14,220,000 feet of wharf lumber for Hogs Island. In calling the meeting to order M. L. Fleishel, manager of the Carpenter-O'Brien Lumber Co. of Eastport, Fla., stated that they had been dilatory in fulfilling their pledges, and that for some reason the association had not been able to instill into them the necessity for prompt action in supplying the Government with the desired timbers. He took the mill men to task in being sorely lacking in patriotism, stating that in order that they should be made to feel the importance of their doing their bit during the war, he had invited several well-known public men of the State to address them.

S. J. Carpenter, president of the Carpenter-O'Brien Lumber Co., who has just returned from Washington, where he held several conferences with the lumber committee of the Council of National Defense, was the first speaker. He declared that he had come to Jacksonville to call a conference of every employe in his company and address them on the necessity of getting out more lumber for the Government. He told the mill men that every day they delayed shipments of lumber to the Government shipyards they were placing their own sons, brothers or friends nearer to death in the war, and that if this country could build ships fast enough there was a possibility that not a mother's son from this country would have to suffer death or wounds in France.

Judge W. H. Baker and C. M. Cooper, two leading attorneys of Jacksonville, exhorted the mill men to get out the ship stock, as well as all other Government orders, advising them that if it was not for these activities on the part of the Government the prices of lumber would be far below normal. The reason for their appearance before the association was pointed out by both, in which they stated that articles concerning embargoes and commandeering methods had been called to their attention, and they appealed to the lumbermen not to allow such a condition to exist again.

The meeting resulted in the association to a man sending telegrams to Washington assuring the Government that they would return to their respective mills and get out lumber as fast as possible, and accepting the additional contracts. It is believed that in the future no shipyard in the Southeast will be in need of ship stock if it is in the power of the members of the association to furnish it.

Read With Interest and Approval.

F. C. HOOPER, J. P. Houck Tanning Co., Harrisonburg, Virginia.

Herewith subscription for one year. I wish to commend you on your interesting weekly, with its valuable commercial news and ably written editorials, which I have read with interest and approval.

Construction Department

IN ORDER TO FOLLOW UP

Properly the Construction Department items, please bear in mind the following statements:

EXPLANATORY

The MANUFACTURERS RECORD seeks to verify the items reported in its Construction Department by full investigation. It is often impossible to do this before the item must be printed or else lose its value as news, and in some items it is found advisable to make statements as "reported" or "rumored," and not as positive information. If our readers will note these points they will see the necessity of the discrimination. We are always glad to have our attention called to errors that may occur.

HOW TO ADDRESS

The name of one or more incorporators of a newly incorporated enterprise should always be written on letter addressed to the official headquarters or to the town of the parties sought, as may be shown in the item. Sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. By following these general directions the post-office will generally be enabled to deliver your mail promptly, although it is inevitable that some failure by the postal authorities to deliver mail to new concerns will occur, as our reports are often published before new companies are known and before they have any established office for the receipt of mail.

WRITE PERSONAL LETTERS

In communicating with individuals and firms reported in these columns a letter written specifically about the matter reported will receive better and quicker attention than a circular. In most instances a return postal card or addressed and stamped envelope should be enclosed with letter.

In correspondence relating to information published in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

DAILY BULLETIN

The Daily Bulletin of the Manufacturers Record is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$25 per year.

All advertising contracts in the Manufacturers Record for three months or longer include a subscription to the Daily Bulletin for the contract period, as well as a subscription to the Manufacturers Record.

AIRPLANE PLANTS, STATIONS, ETC.

Va., Alexandria—Aeroplanes.—Kendrick Aeroplane Co. organized by Blaine Elkins (Pres.), H. A. Briggs and others, all of Washington, D. C.; leased brick building on St. Asaph St. between Pendleton and Wythe Sts.; equip to manufacture aeroplanes.

BRIDGES, CULVERTS, VIADUCTS

Ark., Batesville.—Independence County will construct highway bridge on Lowe Creek, 60-ft. span and 16-ft. roadway, White River Township; J. H. Jimerson, County Judge, receives bids Nov. 13 at Main St. door of Courthouse. (See Machinery Wanted—Bridge Construction.)

Ark., Index.—Red River Bridge Dist. Commissioners, Louis Josephs, Secy., Texarkana, Ark., let contract Midland Bridge Co. of Kansas City, to construct highway bridge across Red River near Index; length 1800 ft.; 18-ft. paved driveway, both of bridge proper and trestle approaches; 6 concrete pin-connected piers, sunk to bed rock in river; 2 spans to be 164 ft. long, three 200 ft. long and one 204 ft. long; latter to be lift type and provided with signal lights and bell; reinforced concrete trestle 50 ft. long on Little River county side and one 450 ft. long on Miller County side; issue \$260,000 bonds; Harrington, Howard & Ash, Conslt. Engrs., Kansas City, Mo. (Lately noted inviting bids.)

Ga., Woodbine.—Camden County Commrs., I. F. Arnow, Chmn., let contract to Austin Bros., Atlanta, Ga., to construct steel bascule drawbridge across Satilla River; bid of Austin Bros., \$17,800 for entire bridge as planned, but with substitute of Scherzer rolling lift bridge for trunnion bridge as per design of Conslt. Engr., Wm. M. Torrance, 123 Bull St., Savannah, Ga. (Bids lately noted.)

Md., Bacon Hill.—Maryland State Roads Com., 601 Garrett Bldg., Baltimore, asks bids until Oct. 16 to reconstruct slab bridge in Cecil County; 2 spans 13 ft. 6 in. in clear (See Machinery Wanted—Bridge Construction.)

Mo., Independence.—Kansas City Southern Ry., J. M. Weir, Ch. Engr., Kansas City, has plans and specifications by Waddell & Son, 934 Wyandotte St., Kansas City, Mo., for re-

inforced concrete viaduct across North River Blvd.; Railway Co. to let contract and supervise work. (Lately noted to cost \$6000.)

Okla., Hobart.—Kiowa County Commrs. let contract P. E. Wheeler to construct 14 concrete bridges on Ozark Trail; cost \$8684.

Okla., Holdenville.—Hughes County, Newburg Township, voted bonds to construct bridges and roads. Address County Commrs. S. C. Charleston.—Charleston County Commissioners will order vote on \$275,000 bonds to construct or purchase bridges, improve roads and provide for sinking fund.

Tenn., McGhee.—Fort Loudon Bridge Co., J. C. Anderson, Pres., Vonore, Tenn., will construct steel bridge across Little Tennessee River at Indian Rock, near McGhee; bids until Oct. 25. (See Machinery Wanted—Bridge Construction.)

Tex., Dallas.—Dallas Southwestern Traction Co., John T. Witt, Engr., 304 Gaston Bldg., Dallas, will build 200-ft. and 125-ft. span steel bridge, with trestle approaches, across Trinity River, in connection with railroad construction; bids until Oct. 6. (See Machinery Wanted—Bridge (Steel) Construction.)

Tex., Dallas.—E. P. Turner and others will construct bridge for interurban railway from Irving into Dallas.

Tex., Fort Worth.—City is considering construction of all-concrete viaduct costing \$150,000 at Jennings Ave. or repairing present structure at estimated cost of \$18,000; F. J. Von Zuben, City Engr.

W. Va., Charleston.—Kanawha County Commrs., Charleston, and Lincoln County Commrs., Hamlin, are having plans and specifications prepared for steel bridge over Big Coal River at mouth of Alum Creek.

CANNING AND PACKING PLANTS

Fla., Cape Sable.—Metropolitan Corp. (financed in Chicago) will have vegetable dehydrating plant designed, installed and operated by Wm. D. Edwards, care of B. F. Sturtevant Co., 530 Clinton St., Chicago, Ill.; plant (of 4 units) 200x55 ft., capacity 1000 bu. raw material daily, designed for continuous operation from receiving bins for raw material to storage bins for dry product.

Fla., Starke.—H. A. Shaver has purchased machinery for vegetable cannery; capacity 3 cars weekly; has building. (Lately noted to establish sweet-potato cannery.)

Fla., Sneads Island.—Sneads Island Dock & Packing Co. will erect 750-ft. driveway dock, 80x100-ft. wharf and 40x50-ft. truck packing house, all of pine and cypress construction; let contract to C. H. Meadows, Manatee, Fla.; W. R. Huntington, Elyria, Ohio, Pres.; D. N. Thompson, V.-P.; G. H. Judd, Secy.-Mgr.; both of Sneads Island. (Lately noted inceptd., capital \$5000.)

La., New Orleans.—Wilson & Company, Chicago and New York, are reported as contemplating \$2,000,000 expenditure to provide facilities for killing and packing meat; probably slaughter 6000 to 7000 head of cattle each month; has options on two river sites; submitted killing proposition to New Orleans Co-operative Butchers' Abattoir Assn.; S. D. Cooper, New Orleans, Mgr.

W. Va., Glen Ray.—Greenbrier Canning Co., capital \$20,000, inceptd. by J. Forest Witten, Alderson, W. Va.; W. D. Slaven and others of Charleston.

CLAYWORKING PLANTS

Ark., Pine Bluff.—Brick and Tile.—Arkansas Brick & Tile Co. contemplates expending \$15,000 for improvements to plant.

Va., Norfolk.—Tile.—Meldette Corp., capital \$25,000, chartered; F. W. Melde, Pres.; W. W. Parramore, Secy.

COAL MINES AND COKE OVENS

Ala., Pawnee.—Oscar R. Hundley of Birmingham, H. J. Wilson and Burton O. Smith of Chicago, and L. C. Stewart of Willow Hill, Ill., purchased Pawnee Land & Mineral Co. properties, including 7400 acres of Blount County coal, iron and timber land, on Louisville & Nashville R. R., 30 mi. from Birmingham; organize new corporation to continue and extend developments; probably elect Messrs. Hundley, Stewart and Wilson as president, vice-president and general manager, respectively.

Ky., Ashland.—Beaver Elkhorn Coal Co. increased capital from \$74,000 to \$104,000.

Ky., Bevier.—Bevier Coal Co. increased capital from \$20,000 to \$100,000.

Ky., Centertown.—Centertown Coal Co., capital \$160,000, inceptd. by Jas. I. Hosick, W. H. Barnes and P. O. McKinney.

Ky., Corbin.—Appalachian Jellico Coal Co., capital \$10,000, inceptd. by Oscar W. Black, Lee Stone and C. C. Poynter.

Ky., East Bernstadt.—Mountain Gem Coal Mining Co., 610 Lincoln Bldg., Louisville, organized; L. N. Birk, Pres.; E. L. Ruess, V.-P.; C. T. Meredith, Secy.-Treas.; develop 200 acres. (Lately noted inceptd., capital \$10,000.)

Ky., Glenn.—Ledford Coal Co. organized; Wm. Ledford, Pres., Treas. and Mgr.; W. B. Napier, V.-P.; both of Glenn; S. N. Welch, Secy., Irvine, Ky.; develop 200 acres. (Lately noted inceptd., capital \$10,000.)

Ky., Hazard.—Solar Coal Co. organized by P. T. Wheeler, Walter S. Harlan and J. B. Allen; capital \$50,000; develop 600 acres on Little Willard Creek.

Ky., Lily.—Old Lily Mining Co., inceptd. by C. C. Hoskins, Patie Hoskins and S. W. Gregory.

Ky., Louisville.—Harian Coal Co. increased capital from \$150,000 to \$200,000.

Ky., Louisville.—Hunt-Erdmann Coal Co., 1401 W. Ormsby St. (present address), organized; C. A. Erdmann, Pres.; E. D. Hunt, V.-P. and Mgr.; Linton H. Erdmann, Secy.-Treas.; acreage and capacity not decided. (Lately noted inceptd.)

Ky., Madisonville.—Grapevine Coal Co. organized; R. E. Cooper, Hopkinsville, Ky., Pres.; C. H. Murphy, V.-P.; Frank G. Wake, Secy.-Treas.; W. S. Elgin, Mgr.; all of Madisonville; develop 326 acres; install equipment; contemplates 1000 (or more) tons daily capacity. Lately noted inceptd., capital \$30,000. (See Machinery Wanted—Mining Machinery.)

Ky., Urvah.—Urvah Coal Co., capital \$75,000, inceptd. by W. H. McIlhenny, Chas. W. French, T. M. Morrison, all of Bluefield, W. Va., and others.

Ky., Pineville.—Lewis Coal Co., capital \$10,000, inceptd. by M. H. Lewis, C. C. Lewis and N. T. Arnett.

Ky., Poor Fork.—United States Coal & Coke Co. of Gary, W. Va., J. T. Franklin, Asst. Supt. at Benham, Ky., has plans and specifications for construction in connection with plan to develop 20,000 acres coal land and build mining town; purchased \$25,000 lumber supply to construct temporary buildings and ordered \$125,000 lumber supply for permanent structures; latter to include 160 eight-room dwellings; contracts awarded do not include doors, windows, shingles, hardware, plaster, electric-lighting materials, etc. (As lately noted, plans for this development include: Electric-driven equipment for daily capacity 10,000 tons coal; town development costing \$1,900,000; 10 mining plants; water works; electric-lighting plant; sewer system; restaurants; schools; churches; moving-picture theaters, etc.; ship coal to company's coke plants at Gary, Ind., South Chicago, Ill., and Joliet, Ill.; total expenditure, probably \$3,000,000; Howard N. Eavenson, Chief Engr., Gary, W. Va. (General outlines of plan for this development noted in August and September.)

Ky., Wallins Creek.—Plate Fork Coal Co., capital \$3000, inceptd. by O. H. Howard, Homer Walker and Gus Cordas.

Md., Oakland.—Wolf Den Coal Co. organized; W. A. Marshall, Pres.; R. H. Burrows, V.-P.; D. L. Morrison, Treas.; J. D. Kline, Secy.; all of New York; purchased 1436 acres coal land in Garrett County and will develop; construct 2 mi. standard-gauge track from mines to connect with Western Maryland Ry. at Harrison, W. Va.; develop townsite of Shallmar; mines on panel system; build sawmill at townsite to cut lumber for tipples, houses and other improvements; invites bids on erection 10 to 20 houses; Thos. Griffith is Supt. (Lately noted to develop coal mines and construct tipples with daily capacity 2000 tons coal.)

Mo., Versailles.—Missouri Coal Mining & Mfg. Co., capital \$50,000, inceptd. by Jas. H. Canfield, Geo. Hubbard, John B. Sheets and Ernest Pearce.

Okla., Oologah.—Oologah Coal & Mining Co., capital \$50,000, inceptd. with Geo. Cooley, Pres., Joplin, Mo.; C. M. Anderson, V.-P., Wichita, Kan.; S. M. Jewett, Secy., Tulsa, Okla.; A. C. Gunther, Supt. and Gen. Mgr., Claremore, Okla.; has 220-acre coal land lease in Rogers County and will develop.

Tenn., Knoxville.—Black Eagle Coal Co., capital \$6000, inceptd. by Milton M. McDermott, Chas. M. Allen, J. B. Jones and others.

Tenn., Knoxville.—Volunteer Coal Co., capital \$100,000, inceptd. by W. P. Davis, E. D. Attix, W. A. C. Van Benschoten and others.

Tenn., Knoxville.—Shamrock Coal Co., capital \$50,000, inceptd. by W. P. Davis, E. D. Attix, W. A. Van Benschoten and others.

Tenn., Oneida.—A. B. Day and Jno. F. Shea of Knoxville, Tenn., purchased 54,000 acres Scott county coal land from New River Coal & Coke Co.; will develop 5 mines equipped; plan to open additional mines for increased production; Jno. F. Shea has been cutting timber (for several years) on this property.

Va., Big Stone Gap.—Liberty Coal Corp., capital \$100,000, chartered; Ben H. Taylor, Pres.; R. J. Morris, V.-P.; J. S. Gillespie, Secy.; all of Johnson City, Tenn.

Va., Norton.—Roy Coal Co. organized; Lee Kilgore, Coeburn, Va., Pres.; John Jenkins, V.-P.; Roy Fuller, Secy.-Mgr.; Roy Kilgore, Treas., all of Norton; develop 20 acres; daily capacity 60 tons; need steel rails, mine cars and pump. Lately noted inceptd., capital \$10,000. (See Machinery Wanted—Rails; Cars; Pump.)

Va., Tacoma.—Joncoswell Coal & Mining Co. organized; F. A. Cosgrove, Pres.; A. B. Wells, V.-P.; both of Middlesboro, Ky.; J. S. Johnson, Tacoma, Secy.-Treas.; develop 100 acres. (Lately noted chartered, capital \$10,000.)

W. Va., Beckley.—Hawley Coal Co., capital \$100,000, inceptd. by J. L. Hawley, T. E. Combs, B. J. Shumate and others.

W. Va., Charleston.—Rock Bottom Coal Co., lately noted inceptd., will operate at Rock-bottom, W. Va. (See W. Va., Rockbottom.)

W. Va., Charleston.—Witcher Creek Coal Co., Box 973, organized; Hugh Rollin, Pres.; H. E. Shadle, V.-P.; J. Walter Webb, Secy.-Mgr.; H. B. Shadle, Treas.; develop 400 acres; capacity not decided; install incline and electric cutting machinery. Lately noted inceptd., capital \$10,000. (See Machinery Wanted—Rail; Wire Rope.)

W. Va., Huntington.—Halcon Coal Mining Co., capital \$125,000, inceptd. by C. W. Campbell, D. W. Brown, C. N. Davis and others.

W. Va., Logan.—United States Coal & Coke Co., Gary, W. Va., purchased 50,000 acres Logan and Mingo County coal land from United Thacker Coal & Coke Co.; plans development; reported as contemplating investment of several million dollars to open and equip mines, build mining town, etc.

W. Va., Marion County.—Marion Coal Co., capital \$75,000, inceptd. by David M. Witter, E. D. Smith, J. H. Polk and others, all of Des Moines, Iowa.

W. Va., Monongalia County.—American Coal, Iron & Coke Co., capital \$100,000, inceptd. by Nelson C. Hubbard, John P. Arbenz, M. E. Blatchley, all of Wheeling, W. Va., and others.

W. Va., Philippi.—Barbour Fuel Co., capital \$100,000, inceptd. by Wm. T. George, J. Blackburn Ware, A. B. Cornwell and others.

W. Va., Rockbottom.—Rock Bottom Coal Co., St. Albans, W. Va., organized; C. D. Hopkins, Pres.; J. M. Epperly, V.-P.; both of St. Albans; F. M. Stambaugh, Secy.; R. Kemp Morton, Treas., both of Charleston, W. Va.; W. G. Warwick, Rockbottom, Mgr. and Constr. Engr.; develop 157 acres. Under W. Va., Charleston, lately noted inceptd., capital \$40,000. (See Machinery Wanted—Mining Machinery.)

COTTON COMPRESSES AND GINS

Ark., Hope.—Hope Cotton Compress Co. organized; J. P. Brundidge, Pres.; E. C. Brown, V.-P.; E. S. Greening, Jr., Secy.; J. T. Robertson, Mgr.; purchased plant of St. Louis Compress Co.; capacity 800 bales daily. (Lately noted inceptd., capital \$100,000.)

Ark., Paltmos.—United Oil Mills will rebuild cotton gin reported burned at loss of \$300.

Fla., Leesburg.—G. J. Griffin of Eustis, Fla., contemplates building cotton gin.

Okla., Broken Bow.—Farmers & Merchants Co-operative Gin & Milling Co., capital \$400; inceptd. by J. H. Johnson, W. F. Armstrong and H. Sebel.

Opla., Stillwell.—G. Ferguson will build cotton gin.

Okla., Stillwell.—J. A. Wright will build cotton gin.

Tex., Grandfalls.—Grandfalls Gin Co., capital \$10,000, inceptd. by John Miller, Edward Miller and Jas. Miller.

Tex., Houston.—Houston Compress Co., capital \$300,000, inceptd. by M. D. Anderson, Benj. Clayton and W. L. Clayton.

Tex., Tuscola.—Reynolds Gin Co., capital \$10,000, inceptd. by J. A. Reynolds, Ben. L. Cox and Roy S. Reynolds.

COTTONSEED-OIL MILLS

Okla., Hominy.—Hominy Cotton Oil & Ice Co. increased capital from \$30,000 to \$50,000.

DRAINAGE SYSTEMS

Ala., Lowndesboro.—Drainage district is being organized; drain about 20,000 acres in Lowndes County, vicinity of Letohatchee Creek; estimated cost \$200,000; Engr., J. Rice Scott of Sarasota and Bartow, Fla. (address also Lowndesboro), is making preliminary survey.

ELECTRIC PLANTS

Ga., Clarksville.—Wofford Shoals Light & Power Co., J. A. Wells, Secy.-Treas., Cornelia, Ga., advises Manufacturers Record relative to lately-noted transmission system: Will construct by company's force a 3-phase transmission line 5½ mi. to connect Clarksville system with Cornelia system; cost within \$500; probably later build transmission line to Lula, Ga.; also contemplates future additional water-power development.

Ga., Lula.—Wofford Shoals Light & Power Co., J. A. Wells, Secy.-Treas., contemplates building transmission line to Lula. (See Ga., Clarksville.)

Ky., Covington.—City will grant franchise to construct and operate power-houses and systems to furnish electric light, heat and power for 20 years; bids until Nov. 30; Lew L. Applegate, City Recorder. (See Machinery Wanted—Electric-light, Heat and Power Systems.)

Ky., Louisville.—Government will construct power-house at Lock No. 41, Ohio River; bids at U. S. Engr. Office until Oct. 31.

Miss., Waynesboro.—City will issue \$6000 bonds to construct electric-light plant. Address The Mayor.

Mo., Kansas City.—Kansas City Light & Power Co., Jos. F. Porter, Pres., 1500 Grand Ave., let contract to Foundation Co., 233 Broadway, New York, to construct foundations for electric generating station; Sargent & Lundy, Engrs., Chicago, furnishing plans and specifications; General Electric Co., Schenectady, N. Y., to furnish two 20,000-kilowatt turbo-generators in May, 1918. (Previously reported to build plant costing \$3,000,000 to \$4,000,000; lately noted that Sargent & Lundy were receiving construction and machinery bids, etc.)

N. C., Warrenton.—City, A. G. Elliott, City Mgr., is having plans prepared by Gilbert C. White, Const. Engr., Durham, N. C., for electric-light plant of about 300 K. W.

Okla., Ada.—Interstate Construction Co., Mainland Bros., Mgrs., Chicago, is reported completing detailed plans and specifications to construct electric generating station 5 mi. north of Ada; proposes transmitting electricity to Ada, Roff, Shawnee, Maud, Konawa, Francis, etc.; equipment to include absorption gasoline plant costing \$20,000; W. H. Zimmerman, Constr. Engr.; A. W. Arnold, Civil Engr.; both of Chicago. (Previously noted.)

Okla., Drumright.—City contemplates constructing white way. Address The Mayor.

Okla., Wapanucka.—City contemplates improvements to electric-light plant; cost \$6000. Address The Mayor.

Okla., Wapanucka.—City voted on \$9000 bonds to construct electric-light system. Address The Mayor.

Tenn., Portland.—Portland Electric Co., capital \$10,000, inceptd. by R. D. Moore, W. C. Skaggs, Geo. W. Moore and others.

W. Va., Fairmont.—Monongahela Valley Tractor Co., E. B. Moore, Gen. Mgr., advises Manufacturers Record: Plant located 5 mi. north of Fairmont on Monongahela River; total cost \$2,000,000; power-house construction, by own force, includes 150x115-ft. boiler-room; 175x50-ft. turbine-room; 175x25-ft. switchroom; all of concrete, brick and steel construction; transmission connecting Fairmont, Clarksburg and vicinity; initial installation 20,000 K. W.; ultimate 75,000 to 100,000; contracts placed include: Boilers, Babcock & Wilcox Co., 85 Liberty St., New York; stokers, American Engineering Co., Philadelphia; turbines, General Electric Co., Schenectady, N. Y.; condensers, Alberger Pump & Condenser Co., New York; switchboard and transformers, Westinghouse Electric & Mfg. Co., Pittsburgh; Engrs., Sanderson & Porter, 52 William St., New York; Resident Engr., A. C. Polk, Box 523, Fairmont. (In July, noted as to construct 30 mi. transmission lines furnishing electricity to various coal mines; steam turbine power plant previously mentioned.)

FLOUR, FEED AND MEAL MILLS

Ala., Eufaula.—W. Lawrence Wild, L. Y. Dean, Jr., and others are promoting organization of company to build feed crusher and grain elevator.

Ala., Hurtsboro.—T. S. Davis will establish velvet bean meal mill of 10 tons daily capacity; open bids about Dec. 1 on ordinary construction building; has building and power; purchased machinery. (Lately noted.)

Ark., Stuttgart.—Arkansas Grain Co. will build flour mill with daily capacity 50 bbls.; also build elevator with capacity 10,000 bu. wheat; J. W. and Floyd Seaman will be Mgrs.

Okla., Broken Bow.—Farmers & Merchants Co-operative Gin & Milling Co. inceptd. by J. H. Johnson and others. (See Cotton Compressors and Gins.)

Okla., Quapaw.—Reeves Mill & Elevator Co., organized; C. D. Reeves, Pres.-Mgr.; M. B. Reeves, V.-P. and Secy.; L. M. Tyler, Treas.; has plant; daily capacity 500 sacks corn meal, 1000 sacks corn chops. (Lately noted inceptd., capital \$10,000.)

Okla., Shawnee.—Shawnee Milling Co. will build alfalfa mill.

S. C., Allendale.—All's Ginnery, P. Hamilton All, Propr., will erect \$2500 flour-mill building and \$1000 velvet-bean mill building; install flour-mill machinery costing \$3500 and velvet-bean mill machinery costing \$1400; daily capacity 50 bbls. flour and 30 tons velvet-bean meal. Lately noted. (See Machinery Wanted—Threshers, Hullers, Etc.)

Tex., Kaufman.—W. E. Jones will build flour mill of 50 bbls. daily capacity; purchased machinery.

FOUNDRY AND MACHINE PLANTS

La., Shreveport.—Oil Well Supplies and Machinery.—Pelican Well Tool & Supply Co. is removing equipment to new location noted

in August; cost of buildings and grounds \$28,000; M. S. Rudy, Contr.; company will install forge shop equipment, including steam hammer. (See Machinery Wanted—Hammer.)

Md., Baltimore.—Tanks and Boilers.—McNamara Bros. Co., Inc., Ranstead's Wharf, let contract to J. L. Robinson Construction Co., 66 Knickerbocker Bldg., Baltimore, to build steel-plate tank and boiler factory at Bush St. and B. & O. R. R.; steel and corrugated-iron walls; concrete foundation; brick; steel sash; slag roofing; Herman F. Doeleman, Engr., 1101 American Bldg., Baltimore. (Noted in July.)

Md., Baltimore.—Cannon.—Poole Engineering & Machine Co. purchased 100 acres adjacent to plant; invest probably \$1,000,000 for improvements, buildings, machinery, etc., to construct medium caliber guns for Government; has large contract. (Lately noted letting contract to H. D. Watts Co., Garrett Bldg., Baltimore, for building gun shop; 1 story; 500x154 ft.; concrete and steel construction; slag roof; steam heat; reported to cost \$400,000; W. H. Emory, Archt., of Emory & Nussear, 415 Professional Bldg., Baltimore.

S. C., Anderson.—Machinery.—Anderson Machine & Foundry Co. plans rearrangement of steam-heating system and installation of sanitary equipment; erect addition; brick; 16x45 ft.; 2 stories; first floor of cement.

Va., Roanoke.—Valves.—Payne Valve Corp., Nininger Bldg. (postoffice box 252), purchased 60x100-ft. frame building; will install automatic screw and turret-forming machinery to manufacture small valves for automobile tires, 30,000 daily; M. J. Payne, Staunton, Va., Pres.; J. P. Filippo, V.-P.; W. L. Craft, Secy.; S. J. Greene, Mgr.; all of Roanoke. Noted in Aug. (See Machinery Wanted—Screw Machinery, etc.)

GAS AND OIL ENTERPRISES

Ky., Lexington.—Phoenix Oil Production Co., capital \$50,000, inceptd. by Fletcher Mann, W. P. Richardson and L. L. Roberts.

La., Gretna.—W. A. Campbell and others have municipal franchise to install natural system.

Mo., Joplin.—Joplin Oil Co., capital \$30,000, inceptd. by G. W. Young, A. H. Gaffee and J. L. Roller.

Mo., Kansas City.—Pacific Oil & Gas Co., capital \$40,000, inceptd. by E. M. Wasserstrom, A. B. Oassman, Eugene Lacy and others.

Okla., Chickasha.—National Oil Co., capital \$75,000, inceptd. by C. Schlotebeck and others.

Okla., Cushing.—Oil Refinery.—Duplex Oil & Refining Co., capital \$250,000, inceptd. by Herman F. Grim of Cushing, R. B. Batton of Brownwood, Tex., and J. E. Allen of Pittsburgh, Pa.

Okla., Drumright.—Parrot Oil & Gas Co., capital \$50,000, inceptd. by J. A. Bushey, E. F. Nienast and F. E. Bushey.

Okla., Enid.—Southern Consolidated Oil Co., capital \$300,000, inceptd. by Geo. F. Southard, H. E. Southard and H. G. McKeever.

Okla., Frederick.—Eli Oil Co., capital \$20,000, inceptd. by J. B. Beard, Jr., C. C. Grigsby and C. I. Kent.

Okla., Muskogee.—Rock Ridge Consolidated Oil Co., capital \$10,000, inceptd. by C. P. Gotwals and others.

Okla., Muskogee.—Hyatt Oil & Gas Co., capital \$20,000, inceptd. by H. R. Hyatt and W. D. Ford of Muskogee and Ren F. Barteche of Kansas City, Mo.

Okla., Muskogee.—Premier Oil & Gas Co., capital \$100,000, inceptd. by W. A. Fyffe, J. B. Huff and J. T. Cooper, all of Checotah.

Okla., Muskogee.—Clara B. Oil & Gas Co., capital \$25,000, inceptd. by J. L. Greaber, Herbert Gibson and John Wheeler.

Okla., New Healdton.—Hagood Oil & Development Co., capital \$500,000, inceptd. by C. M. Hagood of New Healdton, J. S. Strong of Oklahoma City and Fred A. Gillette of El Reno.

Okla., Oklahoma City.—D-V-G Mining & Oil Co., capital \$25,000, inceptd. by H. L. Brock, Lowry Vaney and Jos. S. Gendron.

Okla., Oklahoma City.—Nina-Lee Oil Co., capital \$60,000, inceptd. by H. O. Bird, Norman H. Wright and A. E. Kull.

Okla., Oklahoma City.—Production Oil Co., capital \$60,000, inceptd. by C. S. Moore, Wm. J. Armstrong and others.

Okla., Oklahoma City.—Oil Refinery.—Burlington Oil & Refining Co., capital \$1,000,000, inceptd. by H. W. Ferguson of Oklahoma City, W. D. King and R. R. Sims of Frederick, Okla.

Okla., Sapulpa.—Blue Bell Oil Co., capital \$80,000, inceptd. by S. C. Waggoner, F. H. Cheshire and Grant Borden.

Okla., Sapulpa.—Oil Refinery.—Bison Refinery Co., capital \$250,000, inceptd. by D. H. Rowland, C. C. Colline and R. V. Burke.

Okla., Tulsa.—Lone Star Oil & Gas Development Co., capital \$10,000, inceptd. by D. C. McCord and others.

Okla., Tulsa.—Pipe Line.—Humphreys Pipe Line Co., capital \$500,000, inceptd. by John B. Means and N. J. Gubsher of Tulsa and A. E. Humphreys of Denver, Col.

Okla., Tulsa.—Bermuda Oil & Gas Co., capital \$25,000, inceptd. by R. I. Taylor, J. E. Hildt and F. M. Drane.

Tex., Beaumont.—Del Oil Co., capital \$16,500, inceptd. by S. W. Pipkin, H. C. Weiss and Jean Pipkin.

Tex., Burkburnett.—Oil Refinery.—Burkburnett Refining Co., capital \$30,000, chartered by W. R. Shepard (Cashier State Bank of Burkburnett) and Wm. Daniels of Burkburnett, F. C. Hoyt of Wichita, Kan., and others; build oil refinery of 2000 bbls. capacity.

Tex., Cooper.—Gumbo Oil & Gas Co., organized; J. H. Winkley, Pres.; J. F. Curtis, 1st V.-P. and Gen. Mgr.; J. M. Yeargan, 2d V.-P.; C. B. Anderson, Secy.-Treas.; has leases; ready for bids on drilling; use rotary drill. Lately noted inceptd., capital stock \$60,000. (See Machinery Wanted—Well Drilling, etc.)

Tex., Saratoga.—Goolsbee Oil Co., capital \$11,000, inceptd. by W. A. Goolsbee, W. H. Clark and E. A. Young.

Va., Norfolk.—Supply Station.—Standard Oil Co. will establish fuel oil and gasoline supply station; 60-acre site at Bush Bluff, of which 30 acres are low land, mostly under water, and 30 acres high land; plans include: Concrete bulkhead on creosoted piles, length 1900 ft., 750 ft. across front, built entirely on low ground filled in by dredging; concrete pier (extending from bulkhead 1600 ft. to port warden's line) on which number of storage tanks will be placed; tanks supplied from tank steamers, oil pumped direct into tanks, all supplied to vessels through pipe line along sides of pier; breakwater of concrete or other material on either side of pier; dredge river inside of pier to depth of 40 ft. to ship channel; later proposes to build manufacturing plant on high land.

W. V., Benwood.—Benwood Oil Co., capital \$20,000, inceptd. by John J. Shipper, Lake Garvey, W. J. Blake and others.

HYDRO-ELECTRIC PLANTS

Ga., Cornelia.—Wofford Shoals Light & Power Co., J. A. Wells, Secy.-Treas., will develop additional power. (See Electric Plants, Ga., Clarksville.)

Okla., Eufaula.—City accepted plans by J. L. Lowe for power plant at river; erect brick building for boiler, pumping-room, etc.; soon invite bids.

Va., Springwood.—Jasper Miller, Charlotte, N. C., plans organization \$300,000 company to construct hydro-electric plant, cotton mill, etc., lately noted; develop 600 H. P. during 3 months and 1500 to 2000 H. P. during 9 months of the year. Lately noted. (See Textile Mills.)

ICE AND COLD-STORAGE PLANTS

Ala., Dothan.—Segrest Cannady Grocery Co. is reported to install refrigerating plant.

Ala., Union Springs.—I. B. Feagin, E. L. Blue, R. E. L. Cope and others are organizing company to acquire and improve Union Springs Ice & Coal Co.'s plant.

D. C., Washington.—American Ice Co., 1437 Pennsylvania Ave. N. W., has plans for remodeling ice plant at 15th and E Sts. N. E., and building 10,000-ton ice-storage plant.

Fla., Clearwater.—Clearwater Lighting Co. will establish cold-storage plant.

Ga., Milledgeville.—Peoples Ice Co. will be organized by J. H. Ennis, capital \$25,000; install ice plant of 20 to 30 tons daily capacity; erect building; open building proposals Nov. 10. (Lately noted.)

Miss., Meridian.—City votes Nov. 2 on \$150,000 bonds to build ice plant. J. M. Dabney, Mayor. (Lately noted to vote.)

N. C., Warrenton.—City, A. G. Elliott, City Mgr., is having plans prepared for 20 to 25-ton ice plant by Gilbert C. White, Consult. Engr., Durham, N. C.

Okla., Hominy.—Hominy Cotton Oil & Ice Co. increased capital from \$30,000 to \$50,000.

Okla., Tulsa.—Tulsa Y. W. C. A. plans to install refrigerating machine to cool refrig-

erators, drinking water, etc., and small ice-making system.

S. C., Greer.—Greer Ice & Fuel Co. will hold meeting Nov. 1 to consider issuance of \$9000 bonds to enlarge ice plant.

Tex., Dallas.—Morris & Co., general office, Union Stock Yards, Chicago, let contract to erect building for cold storage of meats and branch distributing station.

Tex., Dallas.—Geo. A. Hormel & Co. (packers), Austin, Minn., will install refrigerating plant in connection with erection of branch storage and distributing station. (Lately noted under Canning and Packing Plants to have acquired site 90x100 ft. on which to build distributing plant costing \$30,000.)

Tex., Eagle Pass.—Eagle Pass Ice Mfg. Co., E. H. Schmidy, Pres., will build addition to ice factory and install additional machinery to increase daily capacity from 20 to 40 tons.

Tex., San Antonio.—Southern Ice & Cold Storage Co., Mark L. Postlewaite, Gen. Mgr., will build ice plant of 165 tons daily capacity with ice-storage house of several thousand tons; machinery (contract let to York Mfg. Co. of York, Pa.) includes four 40-ton high-speed ammonia compressors, each belted to 125 H. P. electric motors, and 3 freezing tanks, each with 666 400-lb. ice cans. (Lately noted.)

W. Va., Hinton.—Swift & Company (main office, Chicago) will build cold-storage plant; reinforced concrete; 2 stories and basement; cost of building \$50,000; construction by day labor under supervision of superintendent from Chicago.

IRON AND STEEL PLANTS

Ala., Anniston.—Steel Furnaces, etc.—Anniston Steel Products Co. will organize to acquire Anniston Steel Co., Southern Munitations Corp., Anniston Metallurgical Co. and Southern Manganese Corp.; secure (from Illinois Car & Equipment Co.) property now being used by Anniston Steel Co. and leases of Southern Car & Foundry Co.; probably undertake improvements to include constructing additional buildings and office.

Ala., Gadsden.—Iron Furnace.—Alabama Company, Birmingham, will repair and blow in Gadsden furnace; daily capacity, 300 tons iron.

Ky., Grand Rivers.—Iron Furnaces.—Sewanee Iron Co., D. I. Miller, Asst. Mgr., advises Manufacturers Record: All ore mine machinery bought; 1 furnace to blow in about Oct. 15; second furnace to be ready about Jan. 1; machinery purchased, except boilers. Noted organized in May, capital \$100,000; purchased Grand Rivers furnaces; each furnace (2) to have daily capacity 80 to 100 tons iron. (See Machinery Wanted—Boilers.)

Md., Baltimore.—Steel Furnaces.—Hess Steel Corp., Loney Lane and Pennsylvania R. R., let contract to Crowell-Lundoff-Little Co., 1951 E. 57th St. N. E., Cleveland, Ohio, to erect furnace building extension 220x50 ft. (19,000 sq. ft. floor space), costing \$100,000, and 2-story office building 80x42 ft., costing \$25,000; concrete construction for office; steel and corrugated iron for extension; composition roofing, wood finish on concrete for floors; vacuum heating system, costing \$4000; electric light wiring and fixtures costing \$1500; Hess will install additional electric-melting furnaces, cranes, pouring equipment, etc.; manufactures electric furnace alloy steel. (Lately noted letting contract to Crowell-Lundoff-Little Co. for additional construction, etc.)

LAND DEVELOPMENTS

Fla., Cape Sable.—Metropolitan Corp. (financed in Chicago) will cultivate about 2000 acres; use tractors; install dehydrating plant for vegetables; Engr., Wm. D. Edwards, care of B. F. Sturtevant Co., 530 Clinton St., Chicago, Ill. (See Canning and Packing Plants.)

Ga., Macon.—Wheeler Place Co., capital \$15,000. Inceptd. by H. F. Haley, C. A. Odom and W. H. Fowler.

La., Cameron.—J. T. Martin of Kenner, La., will establish plant farm.

Md., Baltimore.—City will vote Nov. 6 on \$3,000,000 loan to construct civic center and public squares. Jas. H. Preston, Mayor.

Mo., St. Louis.—A. W. Schlesier Field & Garden Co. increased capital from \$30,000 to \$100,000.

Okla., Muskogee.—Blackledge Fruit & Nut Co., capital \$25,000. Inceptd. by W. M. Briscoe, H. E. Blackledge and B. F. Blackledge.

Okla., Tulsa.—Russell & Abbott purchased 13½ acres at foot of Main St.; plat and de-

velop as residential section; provide rustic park in center of property.

S. C., Camden.—Hermitage Cotton Mills will develop and expand mill village; retained E. S. Draper, Trust Bldg., Charlotte, N. C., as landscape archt.

S. C., Hartsville.—Southern Novelty Co., C. W. Coker, Treas., engaged E. S. Draper, Trust Bldg., Charlotte, N. C., to draw plans and supervise field work for mill village and grounds improvements; will also erect community-house.

S. C., Meggetts.—Dale Farms Corp., capital \$100,000, chartered by Augustine T. Smythe and S. T. McGee.

Tenn., Jackson.—Madison Land Co., capital \$25,000. Inceptd. by S. A. Henderson, L. L. Fonville, Thos. H. Hughes and others.

Tenn., Morristown.—Southland Development Co., capital \$500,000. Inceptd. by D. M. Evans, J. C. Mitchell, G. T. Harris and others.

Tenn., Whittle Springs.—Whittle Springs Co. increased capital from \$80,000 to \$150,000.

Tex., San Antonio.—Camp Travis Land Co. Inceptd. with Porter F. Loring, Pres.; Geo. C. Holmgren, V.-P.; B. R. Webb, Treas.; W. H. Chambers, Secy.; purchased 20 acres as site for amusement park.

Va., Norfolk.—Ives Farm Corp., capital \$50,000, chartered; L. H. Simpson, Pres.; W. Leon Hall, V.-P.; Jas. B. Denn, Secy.—Treas.

Va., Winchester.—Winchester Apple Orchard Corp., capital \$50,000, chartered; Jas. R. Du Shane, Pres.; F. H. Lyder, Secy.

LUMBER MANUFACTURING

Ala., Chapman.—W. T. Smith Lumber Co. will rebuild burned dry kilns and undertake additional improvements.

Ala., Eutaw.—H. O. Gosha Timber Co., capital \$2100. Inceptd. by H. O. Gosha and others.

Ala., Sylacauga.—Wisconsin-Alabama Lumber Co. will build lumber plant equipped with 2 single bands and resaw; has let machinery contracts.

Ark., Hot Springs.—Fourche River Lumber Co., Bigelow, Ark., advises Manufacturers Record relative to lately noted purchase of yellow pine, white, red and black oak timber on 33,000 acres: Contracted with Forest Service for purchase of some timber in Arkansas National Forest, but will cut at this (Bigelow) mill; no new mills to be installed.

Ark., Pastoria.—Brown & Hackney, Memphis, Tenn., advises relative to lately-noted purchase: Recently bought small tracts of timber at different points in Arkansas; timber will be logged and taken into our mills at Mounds, Ark., or Little Rock.

Ark., Trippe.—T. E. Nelson, L. C. Smith and J. M. Cannon organized company; build sawmill.

Fla., Branford.—Branford Lumber & Shingle Co., organized; H. W. Taylor, Pres., Live Oak, Fla.; L. B. Sutton, Mgr., Branford; purchased plant of Mercer & Bass; rebuilding plant; cost of timber and plant about \$275,000. Lately noted inceptd., capital \$100,000. (See Machinery Wanted—Boilers; Engine.)

Fla., Gardner.—Conwell Lumber Co., capital \$50,000. Inceptd.; H. F. Davis, Pres.; W. G. Wells, V.-P.; C. F. Walter, Secy.—Treas.

Fla., Kenansville.—Hobart, Hunter & Feitner Co. of New York will build cypress mill; has stumpage property in Southern Florida.

Ga., Macon.—Jeffreys, Moyers Mfg. Co. (care of Macon Chamber of Commerce) contemplates building lumber plant.

Fla., Tampa.—T. B. Sherrill and M. P. Mickler purchased timber on tract near Lake Thonotosassa; will build sawmill and cut lumber for use in building wooden ships.

Ga., Lumpkin.—McGregor Lumber Co., capital \$10,000. Inceptd. by P. A. McGregor and others.

Miss., Grenada County.—May Bros. of Memphis, Tenn., purchased \$500 acres timber land in Grenada County; build sawmill of 75,000 ft. daily capacity.

N. C., Campbell's Mill.—Oakland Lumber Co. of Fayetteville, N. C., W. M. Johnson, Secy., and W. R. Taylor Co., sales agent, 710 Lincoln Bldg., Philadelphia, advises Manufacturers Record: Completed installation of double-decked circular saw with resaw, daily capacity 25,000 ft., mainly cypress, also pine; planning to install planing mill, for completion in 90 days. (In June noted to develop 1535 acres in Robeson County, and inceptd. with capital \$50,000.)

N. C., Elizabeth City.—Riverside Lumber Co., capital \$100,000. Inceptd. by N. J. and

C. C. Bailey and L. W. Madrin of Elizabeth City and John F. Kelly of East Orange, N. J.

N. C., State Road.—Blue Ridge Timber Co. organized; Lee A. Briles, Pres.; R. H. Wheeler, Secy., both of High Point; E. C. Slater, V.-P. and Mgr., Max Meadows, Va.; locate plants at Max Meadows and State Road; manufacture lumber. (Lately noted inceptd., capital \$100,000.)

Okla., Miami.—Bradley Independent Lumber Co., capital \$50,000. Inceptd. by T. J. Bradley of Miami, J. N. Harber and S. D. Powell of Seminole, Okla.

S. C., Sumter.—Imperial Lumber Co., capital \$5000. Inceptd.; C. D. Brunk, Pres.—Treas.; F. B. Creech, V.-P.; A. M. Broughton, Secy.

S. C., Wiggins.—Savannah River Lumber Co. will rebuild sawmill reported burned.

Va., Max Meadows.—Blue Ridge Timber Co., Lee A. Briles, Pres., High Point, N. C., will manufacture lumber at Max Meadows and at State Road. (See N. C., State Road.)

W. Va., Huntington.—Ritter-Burns Lumber Co., 11th floor First National Bank Bldg., capital \$100,000. Inceptd.; C. L. Ritter, Pres.; B. B. Burns, V.-P. and Treas.; H. K. Eustler, Secy. and Sales Mgr.

MINING

Ala., Ashland.—Graphite.—Keystone Graphite Co., capital \$150,000. Inceptd. by A. A. Allen, W. W. Bromelsick, A. S. Furtwangler and others.

Ala., Clay County.—A. S. Loventhal of Birmingham and others purchased 236 acres graphite land in Clay County; will build mill.

Mo., Joplin.—Lead and Zinc.—Syndicate Mining Co. will probably rebuild 300-ton mill reported burned at loss of \$25,000.

Mo., St. Louis.—Lead and Iron.—Washington County Lead & Iron Co., 107 N. 18th St., organized; Jos. B. Weigel, Pres.—Mgr.; David Beckett, V.-P.; O. L. Winker, Secy.—Treas.; develop 240 acres; will need machinery. Lately noted inceptd., capital \$250,000. (See Machinery Wanted—Mining Machinery.)

Okla., Miami.—Jayhawk Mining Co. increased capital from \$50,000 to \$150,000.

Okla., Miami.—Lead and Zinc.—Fort Worth Lead & Zinc Co., capital \$50,000. Inceptd. by J. W. Owensby of Miami, W. H. Lovan of Fort Worth, Tex., and Roy Wiley of Century, Okla.

Okla., Quapaw.—Rainbow Mining Co. (F. E. Herring, O. D. Halsell and others) will build 300-ton mill.

Okla., Oklahoma City.—Lead and Zinc.—Miami National Lead & Zinc Co., capital \$200,000. Inceptd. by D. M. Fox and O. L. Parry of Oklahoma City and H. C. Austin of Miami, Okla.

Okla., Oklahoma City.—Lead and Zinc.—Liberty Lead & Zinc Development Co., capital \$150,000. Inceptd. by M. A. Mulholland, Henryetta Seyforth and J. S. Hilliard.

Okla., Oklahoma City.—Old Glory Mining Co., capital \$200,000. Inceptd. by J. M. Owen, R. R. Halliburton and Weston Atwood.

Okla., Picher.—New Chicago Mining Co., capital \$10,000. Inceptd. by H. W. Harrison of Picher, M. L. Greenstreet and A. G. Hoppeck of Joplin, Mo.

Okla., Picher.—Zinc.—Premier Zinc Co., capital \$10,000. Inceptd. by J. H. Wright and M. L. Greenstreet of Joplin, Mo., and H. W. Harrison of Picher.

Okla., Oklahoma City.—D-V-G Mining & Oil Co., capital \$25,000. Inceptd. by H. L. Brock, Lowry Vaney and Joseph S. Gendron.

Okla., Vinita.—Copper.—Red Granite Copper & Water-power Co., capital \$125,000. Incorporated by J. J. Robinson and Paul F. Mackay of Vinita and J. H. Brown of Joplin, Mo.

S. C., McCormick.—Atlantic Manganese Co., Edw. C. O'Brien, Pres., will develop 51½ acres; daily capacity 250 yds. material; about 25 tons, all grades; proposed increase of capacity not decided; estimated cost of additional machinery, etc., \$50,000. (Lately noted, with W. M. Grant, Engr., Birmingham, Ala., to design plant.)

Va., Bristol.—Minerals.—Southern Minerals Corp., capital \$100,000, chartered; E. W. Prescott, Pres.; Mary D. Eyrick, Secy.; both of Boston, Mass.

Va., Clifton Forge.—Feldspar-Mica.—Carolina Feldspar-Mica Corp., capital \$72,000, chartered; C. F. Sentz, Pres., Clifton Forge; G. R. McPherson, Secy., Iron Gate, Va.

Va., Providence Forge.—Sand.—Riverside Sand Co., E. O. Jennings, Gastonia, N. C.,

Pres. and Mgr., Charlotte, N. C., will establish plant to produce sand and asphalt for molding, concrete, brick and plaster; construct 50x200-ft. ordinary-construction shed by day labor; install dryer, steam engine, loading devices, etc. (See Machinery Wanted—Engine and Boiler; Dryer.)

Va., Virginina.—Copper.—Piedmont Copper Mines Corp., capital \$200,000, chartered; Richard B. Washington, Pres.; G. Washington Lewis, Secy.; both of Alexandria, Va.

MISCELLANEOUS CONSTRUCTION

Fla., Safety Harbor.—Dock, etc.—Town, D. M. Pipkin, official, will make lately-noted improvements, cost \$10,000; dredge 30,000 yds. sand; construct dock on concrete piling, wood decking; also 117½ ft. street paving, 20, 9 and 30 ft. in width; Mr. Drew, Engr., Clearwater, Fla. (Lately noted to issue \$10,000 bonds.)

Fla., Sneads Island.—Dock and Wharf.—Sneads Island Dock & Packing Co., G. H. Judd, Secy.—Mgr., will build 750-ft. driveway dock and 100x80-ft. wharf; let contract to C. H. Meadows, Manatee, Fla. (See Canning and Packing Plants.)

Fla., West Palm Beach.—City Council authorized \$16,000 bond issue to construct section of canal from West Palm Beach canal to city limits; this is in addition to \$14,000 lately authorized to be taken from bond fund to construct canal within city limits and build docks, warehouses and terminal basin west of Palm Beach Heights and south of Okeechobee Rd.; Harry C. Fugate, City Engr., will prepare specifications; Johnson Construction Co. of Miami will secure contract.

La., Lake Charles.—Plumbing.—Government let contract C. C. Hartwell Co., New Orleans, fore interior plumbing for buildings at aviation camp; estimated cost, \$50,000; this is exclusive of outside water and sewerage systems; estimated cost of sewer construction, \$200,000.

Miss., Gulfport.—Naval-station Improvements.—Bureau of Yards and Docks, Washington, D. C., submitted specifications to contractors inviting bids for improvements at Gulfport Naval Station; plans approved provide for expenditure of \$500,000 for pier costing \$16,000, base hospital costing \$100,000, roads, drill grounds, etc., requiring balance of estimate; A. A. Baker, Lieut.-Commander of Station.

Tex., Beaumont.—Wharf.—City contemplates extending wharf and terminal system westward from wharf unit No. 2 to Kirby Point; J. Frank Keith, Chrmn. Wharf and Dock Com.

Tex., Carlsbad.—Heating System, etc.—Bollinger-Petty Co. of San Angelo, Tex., at \$47,395 has contract, including heating, plumbing and electric wiring for State tuberculosis sanatorium.

MISCELLANEOUS ENTERPRISES

Ala., Eufaula.—Grain Elevator.—W. Lawrence Wild, L. Y. Dean, Jr., and others are promoting organization of company to build grain elevator and feed crusher.

Ala., Montgomery.—Stock Yards.—Union Stock Yards of Montgomery, Wm. M. Teague, Pres., has plans by Gaffney & Epping of Louisville for plant; submitted plans to contractors for bids; yards 482x317 ft., divided each way by 4 alleys, all roofed; 3½ acres under roof; erect 28 pens for quarantine cattle, 42 pens for other cattle, 45 pens for hogs and sheep, 11 unloading chutes, dipping vats, corn cribs, hay pens, assorting pens, feed platforms, wagon depot, etc.; office building 116x80 ft. containing 10 offices and exchange-room; H. F. Snow to be Gen. Mgr. (Noted in Sept. to expend \$35,000 to \$50,000.)

Ark., Little Rock.—Printing.—Pattee-Mahood Printing Co., capital \$5000. Inceptd.; Fred. Pates, Pres.; Edwin T. Mahood, V.-P. and Treas.; Fred. W. Allsopp, Secy.

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Ga., Macon.—Transportation.—Red-Arrow Transit Co. Inceptd. by R. C. Crowder, M. E. Shering and W. C. Watts.

Ky., Hartford.—Printing.—Hartford Printing Co., capital \$4000. Inceptd. by S. A. Vratheer, John Johnson, C. E. Crowder and others.

Ky., Louisville.—Printing.—Hammer Printing Co. changed name to Hammer Printing & Office Supply Co. and increased capital from \$8000 to \$10,000.

Ky., Louisville.—Glove Cleaning.—Louisville Glove Cleaning Co., capital \$6000. Inceptd. by

M. R. Fritts, R. S. Waggener and J. S. Norman.

La., New Orleans—Incinerator.—Dept. of Public Property, Thos. L. Willis, Engr. in charge, municipal repair plant, advises Manufacturers Record: Plans being prepared for erection of plant to recover greases and fertilizer from garbage, and salable material from other waste, and to incinerate valueless material; plans and specifications probably complete within 60 days; bids will be asked. (Lately noted as triple section dehydrating, utilization and incinerating plant; cost \$1,500,000 to \$1,500,000.)

Mo., Poplar Bluff—Livestock.—T. W. Doherty Land & Cattle Co., capital \$75,000, inceptd. by T. W. Doherty, M. M. McCauley, C. W. Freeman and others.

Mo., St. Louis—Iron and Metal.—Greenberg & Fry Scrap Iron & Metal Co., capital \$10,000, inceptd. by David Greenberg, Sam Fry and Louis Mayer.

Okla., Miami—Transfer.—Prentise Transfer Co., capital \$5000, inceptd. by C. A. Prentise, Gertrude M. Prentise and J. H. Taylor.

S. C., Norway—Livestock.—Norway Livestock Co., capital \$10,000, inceptd. by H. P. Fulmer, J. F. Huth and J. B. Fulmer.

S. C., Spartanburg—Transportation.—Sanka Road Transportation Co. inceptd. by Reginald U. Knox and Nathan F. George.

Tenn., Chattanooga—Engineering.—Utilities Engineering & Construction Co., capital \$10,000, inceptd. by J. C. Stickney, S. W. Alley, Geo. W. Erwin and others.

Tenn., Dyersburg—Ferry.—Boothspoint Boat Co., capital \$2000, inceptd. by A. J. Henning, W. I. Berkle, W. H. Henning and others; operate freight and passenger ferry on Mississippi, Obion and Forked Deer Rivers.

Tex., Austin—Fire-alarm System.—City, A. P. Woodbridge, Mayor, defeated bonds for installation fire-alarm system. (Lately noted.)

Tex., Freeport—Hardware.—Tobey Hardware Co., capital \$7000, inceptd. by R. J. Dillon, Paul Lessow and Edw. C. Tobey.

Tex., Bay City—Grain Elevator.—Le Tulle Mercantile Co. will erect grain elevator and warehouse; 150x140 ft.; fireproof; elevator proper to be 4 stories with capacity of 20 cars; warehouse to have capacity of 30 cars.

Tex., Port Arthur—Laundry.—Port Arthur Laundry Co., capital \$40,000, organized by G. Harry Shepherd and Albert E. Shepherd (Mgr.) of Beaumont, Tex.; contemplated erecting building; purchased machinery.

Tex., San Antonio—Laundry.—Government will erect laundry in connection with National Army Base Hospital; Stone & Webster Engineering Corp., Contr., main office, 147 Milk St., Boston, Mass.

Va., Petersburg—Publishing.—Petersburg Evening Progress inceptd.; C. L. Snowden, Prest.; E. H. Patterson, V.-P.; Arthur Wood, Secy.-Treas.

Va., Roanoke—Engineering.—John B. Guernsey & Co., capital \$150,000, inceptd.; John B. Guernsey, Prest.; C. J. Stull, Secy.

W. Va., Welch—Plumbing and Heating.—McNary & Johnson Co., capital \$10,000, inceptd. by J. F. Johnson, C. S. McNary, E. C. Bralley and others.

W. Va., Wheeling—Contracting, etc.—Triadelphia Construction Co. (Geo. H. Dieringer interested) organizing for general contracting and developments of improvements.

MISCELLANEOUS FACTORIES

Ark., Carlisle—Creamery.—Union Creamery will build plant lately noted burned at loss of \$2000.

Ga., Atlanta—Bakery.—L. W. Rogers Co., A. D. Rogers, Prest. (wholesale and retail grocer and baker), 29 Garnett St., advises Manufacturers Record: Let contract to A. V. Gude, Gude & Company, Atlanta, to erect concrete building, about 60,000 sq. ft., cost \$75,000, for warehouse and bakery to supply chain of 90 stores in Atlanta; warehouse to contain conveyors, elevators and gravity chute system; bakery machinery; building plans by A. Ten Eyck Brown, Atlanta. (Lately noted to have hourly capacity 18,000 loaves bread; also previously noted under warehouses, with contract awarded.)

Ga., Macon—Bottling.—Macon Bludwine Bottling Co., capital \$3000, inceptd. by Walter H. Fowler, W. C. Fowler and P. W. Hutcheson.

Ky., Ashland—Remedies.—Home Remedies Co., capital \$1000, inceptd. by Alva Sanders, James A. Graham and Edwin Smith.

Ky., Dayton—Watch Cases.—Wadsworth Watch Case Co., capital \$150,000, inceptd. by H. A. Wadsworth, Elizabeth Stegeman, F. B. Stegeman and W. C. Sanders.

Ky., Seabree—Tobacco.—Ramey Tobacco Co., capital \$10,000, inceptd. by C. H. Ramsey, G. O. Tuck and H. Friedberg.

Md., Baltimore—Pigments.—Chemical Pigments Co., President and Fawn Sts., will improve building and install additional new machinery, including electric equipment.

Mo., Cape Girardeau—Dairy Products.—Cape Dairy Products Co., capital \$5000, inceptd. by Max J. Koeck, Chas. H. Overstoltz and Edward W. Hayes.

Mo., St. Louis—Tannery.—Missouri Tanning Co., capital \$90,000, inceptd. by Herman E. Engelsmann, Edward Jostman and David Jones.

Mo., St. Louis—Bottles.—Finger & Carl Bottle Co., capital \$8000, inceptd. by Morris Schwartz, Louis Carl and Joe Finger.

Mo., St. Louis—Mazda Mfg. Co., capital \$2000, inceptd. by J. M. McKernan, Maude McKernan, D. M. Hutchinson and others.

N. C., Greensboro—Dyes.—T. Holt Laird & Co. plan to increase capacity of khaki-dye plant, now 30 bbls. daily.

N. C., Greensboro—Ice-cream.—Arctic Ice & Coal Co., 114 E. Market St., W. C. Boren, Prest., will open bids about Nov. 1 to erect \$20,000 building; probable contractor, Harry Barton, Greensboro; machinery is supplied; manufacture ice-cream.

Okla., Tulsa—Electric Washing Machines, etc.—Fortier Electric Mfg. Co. organized; W. N. Sill, Prest.; G. W. Moore, V.-P.; U. D. Fortier, Secy. and Mgr.; Geo. M. Schiek, Treas.; manufacture electric washing machines and electric time switch. Lately noted inceptd., capital \$30,000. (See Machinery Wanted—Motors.)

S. C., Columbia—Bottling.—Columbia King Cola Bottling Co., capital \$10,000, organized; M. B. Du Pre, Prest.; Thos. B. Pearce, V.-P.; Jos. D. Miatt, Secy.; P. H. Morgan, Mgr.; install bottling machinery, cost \$7000; manufacture soft drinks, about 500 cases daily.

S. C., Darlington—Creamery.—Darlington Creamery Co. will meet Oct. 22 to consider increase in capital from \$5000 to \$7500.

Tenn., Paris—Remedy.—Paris Remedy Co., capital \$50,000, inceptd. by A. H. O'Kain, J. L. Stewart, T. J. Walker and others.

Tex., Austin—Films.—Southern Feature Film Corp., capital \$25,000, inceptd. by Charles E. Pressley, H. D. Cheatham, H. C. Graves and J. P. Fresenius.

Tex., Colorado—Potash.—R. O. Parson contemplates piping brine from alkali lake and manufacturing potash.

Tex., Fort Worth—Serum.—F. E. Kubin of McPherson, Kan., is reported to build black-leg serum plant.

Tex., Houston—Bags.—Werthan Bag Co. will lease building and ordered machinery for bag factory to replace plant reported burned at loss of \$150,000.

Tex., Lufkin—Mattresses.—Lufkin Mattress Co., R. J. Evans, owner, will rebuild factory reported burned at loss of \$2300.

Va., Norfolk—Confectionery.—Southern Confectioners, capital \$50,000, inceptd.; M. Seligman, Prest.; A. M. Walker, Secy.

Va., Norfolk—Beverages.—Frozenpure Corp. of Virginia, capital \$25,000, chartered; H. G. Barbee, Prest.; Shelton N. Woodward, Secy.

W. Va., Huntington—Chemicals.—Lamie Chemical Co., capital \$50,000, inceptd. by Ralph D. Lamie of Huntington, Alton T. Roberts and Dan H. Ball of Marquette, Mich.; John Garvin of Ontonagon, Mich., and others.

MOTOR CARS, GARAGES, TIRES, ETC.

Ala., Anniston—Automobiles.—Turley Auto Co., capital \$10,000, inceptd. to operate taxicab system from Anniston to Camp McClellan.

Ga., Gainesville—Garage.—Louis E. Wisdom, local representative Ford Motor Co., will erect garage; 2 stories; iron and plate-glass front; garage accessories; site 55x125 ft.; E. L. Prater, Contr.

Ky., Louisville—Motor Trucks.—Sandow Louisville Motor Truck Co., capital \$7000, inceptd. by Jas. M. Howard, David L. Van Culin and Mary N. Van Culin.

La., Winnfield—Garage.—Max Theime will build by day labor 2-story 55x100-ft. ordinary-construction garage, cost \$15,000; plans by J. W. Smith, Monroe, La. (Lately noted.)

Md., Baltimore—Automobiles.—Doble-Detroit Steam Motors Co., Detroit, Mich., is considering establishment of automobile factory; plans organizing branch company.

Md., Baltimore—Garage.—Chas. L. Hartman and Jas. L. Ridgeway will have plans prepared by Clyde N. Friz, 1523 Munsey Bldg., Baltimore, for public garage at 1302-04 N. Calvert St.; 3 stories; 75x117 ft.

Md., Frederick—Garage.—Ideal Garage Co. increased capital from \$30,000 to \$50,000.

Miss., Clarksdale—Garage.—Imperial Garage, capital \$10,000, inceptd. by W. K. Herlin and Mrs. Sallie West Herrin.

Mo., St. Louis—Automobiles.—Ferguson Motor Co., capital \$2000, inceptd. by Hutson C. Wilson, Elorius Arce Wilson and Harry M. Sibley.

Okla., Clinton—Automobiles.—Burke Motors Economy Co., capital \$10,000, inceptd. by W. R. Burke and A. J. Welch of Clinton and Chas. F. Gartner of Thomas, Okla.

S. C., Charleston—Garage.—Overland-Palmetto Sales Co., A. J. Wichman, Propr., will erect garage; 115x50 ft.

Tenn., Memphis—Automobiles.—J. P. J. Bruce & Co., capital \$10,000, inceptd. by J. P. J. Bruce, R. H. Moseley, E. S. Elliott and Tom V. Vigue.

Tex., Hillsboro—Garage.—Grimes Garage & Machine Shop, 108 North Waco St., Fred O. Grimes, proprietor, will build garage; erect 50x100-ft. three-story fireproof building, cost \$15,000; buy machinery as needed; equipment includes lathes, drill presses, forges, shaper, hand tools, etc.; now in temporary building. (Lately noted burned.)

Tex., Marshall—Automobiles.—Lothrop Auto Co., capital \$5000, inceptd. by M. Lothrop, Sr., Grafton Lothrop and M. Lothrop, Jr.

Tex., San Antonio—Garage.—L. W. Alexander will erect tile garage; cost \$2500.

Va., Kenbridge—Automobiles.—Lunenburg Motor Co., capital \$15,000, inceptd.; V. C. Love, Prest.; J. R. Etheridge, Secy.

Va., Richmond—Garage.—R. A. Binswanger will erect garage; brick; cost \$2100.

Va., Staunton—Tires.—T. O. Markell of Cleveland, Ohio, is reported as contemplating establishment of tire plant.

W. Va., Huntington—Garage.—Tri-State Garage will occupy garage building to be erected by John Rau, Sr.; structure will be 2 stories and basement, 50x50 ft.

W. Va., Martinsburg—Garage.—Neel Motor Co. will remodel 40x50-ft. building for garage; lower floor of concrete; elevator; lighting and heating systems.

RAILWAY SHOPS, TERMINALS, ROUNDHOUSES, ETC.

Ga., Savannah—Savannah & Atlanta Ry., J. S. Douglas, Supt., Savannah, is reported as planning to build shops.

ROAD AND STREET WORK

Ala., Gadsden—City will pave 12th St. from Walnut to Tuscaloosa St. with asphaltic concrete; estimated cost \$30,000; also pave 6th St. from Walnut to Locust St.; estimated cost \$11,000; R. M. Wilbanks, City Clerk; W. P. Johnson, Mayor.

Ala., Geneva—Geneva County Comms. ordered election to vote on \$100,000 bonds to improve, repair and extend 100 mi. of roads.

Ark., Clarksville—Johnson County Commissioners have plans by State Highway Dept., Little Rock, for macadam road from Pope County to Franklin County line; estimated cost \$140,000.

Ark., Helena—Phillips County Comms. have plans by State Highway Com., Little Rock, for road from Helena to West Helena, 6 mi.; cost \$140,986.94.

Ark., Jonesboro—Craighead County Commissioners, Jonesboro-Netleton Road, Improvement Dist., will soon ask bids (probably for some time in November) on brick and asphaltic concrete pavement; plans and specifications being prepared by Klyce & Kackley, Townley Bldg., Miami, Fla., and Life and Casualty Bldg., Nashville, Tenn.

Ark., Lewisville—Lafayette County Commissioners have plans by State Highway Dept., Little Rock, for 22-mi. gravel road from Columbia County line through Buckner, Stamps and Lewisville to Red River; estimated cost \$100,000.

Ark., Little Rock—City will expend \$100,000 to pave East Sixth St. and other streets included in Paving Dist. No. 261; includes 12,500 sq. yds. bitulith or asphaltic concrete pavement, 27,400 sq. yds. Portland cement concrete; 18,400 cu. yds. excavation; 16,400 lin. ft. curb; 2400 cu. yds. concrete gutters; storm sewers, catch-basins, manholes, water service connections, etc.; bids opened Oct. 10; Lund & Hill, Engrs., 527

Southern Trust Bldg., Little Rock; W. E. Harrington, Chrmn. Paving Dist. No. 261. (See Machinery Wanted—Paving.)

Ark., Van Buren—Crawford County Commissioners are having plans prepared by State Highway Com., Little Rock, for road to connect Fort Smith and Van Buren with Boston Mountains at Winslow.

Fla., Miami Beach—City, R. M. Davidson, Engr., let contract to T. B. McGahey, Miami, Fla., at \$5480.50, to construct rock roadway 2800 ft. long, 18 ft. wide, 12 in. thick. (Bids lately noted.)

Fla., Perry—City voted \$90,000 bonds to pave streets. Address The Mayor.

Fla., Safety Harbor—Town, D. M. Pipkin, official, will construct brick street paving; 284 ft. 20 ft. wide, 733 ft. 9 ft. wide and 155 ft. 30 ft. wide. (See Miscellaneous Construction.)

Fla., Tampa—Hillsborough County will pave with shell Bayshore Rd. from end of present shell road to Little Manatee River; County Comms. receive bids until Oct. 23; W. P. Culbreath, Clerk. (See Machinery Wanted—Road Construction.)

Ga., Darien—McIntosh County Comms. will issue \$55,000 road and school bonds.

Ky., Pikeville—City will pave streets; cost \$30,000; City Clk. receives bids until Nov. 5.

La., Crowley—City will pave Second St. with cement; concrete curbing and guttering; bids until Oct. 16. Address The Mayor.

Md., Baltimore—Paving Commission, S. C. Rowland, Chrmn., City Hall, plans \$1,000,000 expenditure for paving during 1918; lists 85 streets and 30 alleys; 25 to 30 mi. new pavement, principally sheet asphalt.

Mo., Doniphan—Ripley County defeated \$200,000 bonds to improve roads. (Lately reported to vote.)

Mo., Joplin—City will grade and pave Sergeant Ave. from 1st to 3d St.; cost \$3144; also from 3d to 4th St.; cost \$1022; bituminous macadam on macadam base; bids opened Oct. 9; J. B. Hodgdon, Commr. Streets and Public Improvements. (See Machinery Wanted—Paving, etc.)

Mo., Stanberry—City will pave, curb and gutter portions of Park and Locust Sts.; bids opened Oct. 8; Black & Veatch, Engrs., Interstate Bldg., Kansas City, Mo.

N. C., Kinston—Lenoir County Comms. will construct 2 mi. concrete on Central Highway from Lenoir Ave. to Caswell Training School; National Highway Com. to furnish \$10,000; estimated cost \$35,000.

Mo., Maryville—City will construct cement sidewalks; bids opened; E. J. Howland, City Clk.

N. C., Louisville—City let contract R. G. Lassiter & Co., Oxford, N. C., at \$135,990 to construct 50,000 sq. yds. street paving. Gilbert C. White, Engr., Durham, N. C. (Lately noted.)

N. C., Wentworth—Rockingham County Comms. and Comms. of Leakesville, N. C., will pave and otherwise improve road from Reidsville, via Wentworth to Settle's bridge, 11 mi.; road from Spray to Leakesville and portion of Main St. in Leakesville, 1.1 mi.; asphalt, asphaltic concrete, tarvia macadam (penetration method), tarvia macadam (mixed method), Warrenite paving; bids until Oct. 15; J. N. Ambler, Const. Engr., Winston-Salem, N. C.; R. E. Wall, Chrmn. County Comms., Spray, N. C.; E. C. Richardson, Mayor, Leakesville. (See Machinery Wanted—Paving, etc.)

Okla., Ada—City plans additional paving in residence districts; amount \$100,000; Benham Engineering Co., Const. Engr., Colcord Bldg., Oklahoma City. (Lately noted to pave 5 blocks.)

Okla., Ardmore—City Council authorized \$21,556 bonds to improve streets. W. R. Roberts, Mayor.

Okla., Bristow—City plans street and paving improvements to cost \$75,000; Benham Engineering Co., Const. Engr., Colcord Bldg., Oklahoma City.

Okla., Clinton—City Comms. forming additional paving districts; Benham Engineering Co., Const. Engr., Colcord Bldg., Oklahoma City.

Okla., Hugo—Choctaw County, Wilson Township, votes Oct. 13 on \$50,000 bonds to improve roads. Address County Comms.

Okla., Holdenville—Hughes County, Newburg Township, voted bonds to construct roads and bridges. Address County Comms.

Okla., Miami—Ottawa County Comms. ordered election for Nov. 20 to vote on \$350,000 bonds to improve roads.

Okla., Tulsa—Tulsa County Comms. will order election for November to vote on \$1-

500,000 bonds to improve roads. (Noted in August as contemplating construction of hard-surfaced highways for which Max L. Cunningham, State Engr., made surveys and submitted report on construction estimated to cost \$1,500,000.)

S. C., Charleston.—Charleston County Commissioners will order vote on \$275,000 bonds to improve roads, construct or purchase bridges and provide for sinking fund.

Tenn., Cleveland.—City let contract West Construction Co., Chattanooga, Tenn., at \$72,130 to pave streets. (Noted in Aug. as inviting bids to construct 48,000 sq. yds. sheet-asphalt pavement on macadam base.)

Tenn., Mountville.—Sullivan County Commissioners appropriated \$1500 to macadamize road from Bristol corporation line to new King College.

Tenn., Dyersburg.—Dyer County Court will expend \$250,000 on construction of county's section of Jefferson Davis Highway; length 24 mi., exclusive of portion passing through 3 corporate towns of county; road widened and graded preparatory to placing hard surface.

Tenn., Morristown.—City will improve streets in Improvement Dist. No. 11; grading, curbing and guttering, 4½-ft. sidewalks and water-bound street macadamizing to width of 16 ft.; 5000 cu. yds. excavation; 7000 sq. ft. water-bound macadam; 2900 lin. ft. curb and gutter; 34,530 sq. ft. sidewalk; 2230 sq. ft. concrete crossings; 40 lin. ft. 24-in. pipe; 30 lin. ft. 19-in. pipe; 1690 lin. ft. 15-in. pipe; 1200 lin. ft. 12-in. pipe; 200 lin. ft. 10-in. pipe; 14 catch-basins; 7 manholes; bids until Oct. 26; D. C. Morris, Recorder. (See Machinery Wanted—Paving, etc.)

Tex., Austin.—City, A. P. Wooldridge, Mayor, defeated bonds for sewer system and disposal plant. (Lately noted.)

Tex., Claremont.—Kent County, Precinct No. 1, J. H. Montgomery, Jayton, Tex., official in charge, has \$10,000 available for dirt road construction; no bridges. (Lately noted voting \$100,000 bonds.)

Tex., Colorado.—Mitchell County, J. H. Bullock, County Judge, will vote about Nov. 1 on \$70,000 bonds for road construction.

Tex., Dallas.—City Comms. let contract Texas Bitulithic Co. of Dallas to pave Plowman St., from Bishop St. to Beckley Ave.; College Ave., from Swiss Ave. to Texas & Pacific R. R., and Bennett Ave., from Ross Ave. to Live Oak St.

Tex., Dallas.—City Com. let contract Texas Bitulithic Co. of Dallas to pave Grand Ave. from Forney to Fitzhugh Ave.; also let contracts to pave sections of Washington, Gaston and Grand Aves., Leonard and other streets.

Tex., El Paso.—City votes Oct. 31 on \$100,000 bonds to pave street and alley intersections. Address The Mayor. (Lately noted.)

Tex., Fort Worth.—City Comms. and Tarrant County Comms. will resurface Arlington Heights Blvd., from Seventh Street viaduct 2 mi. west to center of Camp Bowie. F. J. Von Zuben, City Engr.

Va., New Kent.—New Kent County Commissioners will issue \$50,000 bonds to improve automobile highway, conditional upon Government appropriation.

Va., Princess Anne.—Princess Anne Commission on Road and Bridges relet contract to construct Water-works Rd. to R. P. Denby; soon relet contract to pave Broad Creek Rd.; rescinded contracts previously let to McGuire Construction Co. for this paving; B. R. Cowherd, Jr., Engr. Eastern Div. State Highway Com.

W. Va., Huntington.—City Comms. let following contracts for street paving: J. Ullom at total of \$23,485.80 to pave sections of Doulton and Oney Aves., 20th and 3d Sts., all with Dixie block; Geo. Henkle at total of \$4193.20 to pave Division St. and Cedar Grove Alley with Hocking block. O. H. Wells, Commr. Streets, Sewers, etc.

W. Va., Huntington.—State Board of Regents, Charleston, contemplate paving College Ave. and sidewalk at Marshall College campus.

SEWER CONSTRUCTION

Md., Annapolis.—Anne Arundel County Comms. instructed County Engr. to invite bids to construct sewer systems at Linthicum Heights and Glen Burnie.

N. C., Charlotte.—City let contract Blankenship & McClelland of Charlotte to construct sewer on Louise Ave.

N. C., Durham.—City let contract Blankenship & McClelland of Charlotte, N. C., at \$9,885.50 to construct sewer and water con-

nections on streets to be paved this year; sewer work will involve construction of 100 lin. ft. 10-in., 1000 lin. ft. 8-in., and 3900 lin. ft. 6-in. sanitary sewers and house connections; K. B. Ward, Ch. Engr., Durham; B. S. Skinner, Mayor. (Lately noted inviting bids.)

Okla., Ada.—City, W. E. Conger, City Clerk, received bids for sewer disposal plant and sanitary lateral sewers, Dist. No. 6; deferred awarding of contract; amount of contract, \$55,000; Const. Engr., Benham Engineering Co., Colcord Bldg., Oklahoma City. (Bids noted in Sept.)

Okla., Bristow.—City will extend sewer and water systems; \$30,000 bonds voted; Benham Engineering Co., Const. Engr., Colcord Bldg., Oklahoma City. (Noted in August.)

Okla., Sand Springs.—City will vote on \$40,000 bonds to extend sanitary and storm sewer systems; Const. Engr., Benham Engineering Co., Colcord Bldg., Oklahoma City, will prepare report.

Tex., Austin.—City, A. P. Wooldridge, Mayor, defeated bonds for street improvements. (Lately noted.)

Tex., Navasota.—City contemplates constructing sewer system. Address The Mayor.

Tex., Waco.—City Comms. accepted plans by P. Trevino, Engr., San Antonio, for sewage-disposal plant; estimated cost \$182,000, exclusive of cost of 10-acre site; Mr. Trevino to supervise construction.

W. Va., Hinton.—City will construct sewer system in Riverview Addition; estimated cost \$2000. Address The Mayor.

W. Va., Princeton.—City contemplates voting on \$50,000 bonds to extend sewer system. Address The Mayor.

SHIPBUILDING PLANTS

Ala., Mobile.—Mobile Ship Building Co. organized; branch of Kelly-Atkinson Construction Co., 189 W. Madison St., Chicago; operate Kelly-Atkinson shipyards recently mentioned; plant to include machine shop, blacksmith shop, power-house and yard office buildings, all of mill construction, costing \$50,000. (Kelly-Atkinson company lately noted advising Manufacturers Record as to this plant, facilities to include constructing composite wood and steel ships.)

Ga., Brunswick.—American Shipbuilding Co., executive office 11 Broadway, New York, let contract to J. G. Conzelmann, Brunswick, to erect 60x150-ft. 2-story mill-construction shop building, with cement (first) floor and composition roof; also 2-story 40x100-ft. stock building. (Recently noted increasing capital from \$50,000 to \$500,000, with various improvements contemplated.)

Miss., Pascagoula.—International Shipbuilding Co., H. H. Roof, Mgr., purchased 10 acres land for plant additions; has 12 sets of ways; will add 4 sets with facilities for constructing steel ships; has contract for four 800-ton vessels, each 560 ft. long.

TELEPHONE SYSTEMS

Mo., Kansas City.—Bell Telephone Co. will erect office and exchange building at cost of \$1,500,000, without equipment; 200x250 ft.; 15 stories; steel and reinforced concrete construction; gravel or Carey on concrete roofing; concrete floors; foundations completed; Archt., H. F. Holt, 315 E. 10th St., Kansas City. (Noted in August.)

W. Va., Pineville.—Wyoming Telephone Co., capital \$70,000, incptd. by Guy White, H. W. Whitehead, Jas. Dameron and others, all of Williamson, W. Va.

TEXTILE MILLS

N. C., Mt. Airy.—Hosiery.—Surrey Hosiery Mills organized; Geo. O. Graves, Pres.; G. C. Lovill and I. W. Barber, V.-Ps.; L. C. Christman, Secy.-Treas.-Mgr.; secured building; install 100 knitting machines; ordered equipment; manufacture hosiery. (Lately noted organized with \$200,000 capital.)

N. C., Shelby.—Cotton Yarn.—Liberty Spinning Co. organized by C. G. Blanton, J. R. Moore and others; capital \$150,000; build cotton yarn mill; install 5000 spindles; construct 25 cottages, equipped with electric light and water supply.

Tenn., Maryville.—Hosiery.—Ideal Hosiery Mills incptd. with \$50,000 capital by S. W. Duggan, T. H. Johnston, Jas. L. Getaz and others; equip for daily capacity 500 doz. pairs men's half-hose; purchased machinery.

Va., Springwood.—Cotton Products.—Jasper Miller, Charlotte, N. C., plans organization of company to build 10,000-spindle mill; also

construct hydro-electric plant developing 600 H. P. during 3 mos. and 1500 to 3000 H. P. during 9 mos. of year; construction to include model mill town; plant and town site of 100 acres on James River and Chesapeake & Ohio R. R.; C. A. Mees, Engr., Charlotte. (Lately noted proposing organization \$300,000 cotton mill and electric-power corporation, etc.)

WATER-WORKS

Fla., Key West.—Commr. of Fisheries, Department of Commerce, Washington, D. C., will construct concrete tower and tanks at Key West Biological Station; bids until October 30. (See Machinery Wanted—Concrete Tower and Tanks.)

Ky., Lawrenceburg.—City votes in Nov. on \$15,000 bonds to build filtration plant. Address The Mayor.

Mo., Galena.—City engaged Burns & McDonnell of Kansas City, Mo., as constructing engineers for water works; prepared plans and estimates of cost; voted on \$100,000 bonds. (Lately noted.)

Miss., Charleston.—City, W. G. Wyatt, Mayor, employed Xavier A. Kramer, Magnolia, Miss., as engineer for water and light power station improvements. (Lately noted voting \$13,500 bonds for water-works construction.)

Mo., Joplin.—City voted on \$100,000 bonds to construct water-works. J. J. McAfee, City Engr.

N. C., Durham.—City let contract Blankenship & McClelland of Charlotte, N. C., at \$9,885.50 to construct water and sewer connections on streets to be paved this year; K. B. Watd, Ch. Engr., Durham, N. C.; B. S. Skinner, Mayor. (See Sewer Construction.)

Okla., Bristow.—City will extend water and sewer systems; \$20,000 bonds voted; Benham Engineering Co., Const. Engr., Colcord Bldg., Oklahoma City. (Noted in August.)

Okla., Hartshorne.—City contemplates voting on \$26,000 bonds to install filtration plant and build city hall. Address The Mayor. (Noted in Aug.)

Okla., Hobart.—City retained Benham Engineering Co., Colcord Bldg., Oklahoma City, to investigate, report and supervise construction on new water supply; will call election to vote bonds; contemplates gravity supply; estimated cost \$100,000.

Okla., Indianapolis.—City voted \$15,000 bonds for water-works. Address The Mayor. (Lately noted.)

Okla., Marshall.—City will probably vote on \$5000 bonds to construct water works. Address The Mayor.

Okla., Redrock.—City Trustees let contract to N. S. Sherman Machine & Iron Works, Oklahoma City, at \$22,000, to construct water-works; Const. Engr., Benham Engineering Co., Colcord Bldg., Oklahoma City.

Okla., Wapanucka.—City voted on \$14,000 bonds to construct water works. Address The Mayor.

S. C., Charleston.—City formally acquired Charleston Light & Water Co.'s plant for \$1,380,000; W. S. Lanneau, Chrmn. Water Supply Committee. (Noted in March to have voted \$1,380,000 bonds to purchase Charleston Light & Water Co.'s plant and \$140,000 additional for improvements and extensions.)

S. C., Columbia.—City, Fred. C. Wyse, Engr.-Supt. Water Dept., will construct brick pumphouse about 36x50 ft.; install pump of 3,000,000-gals. capacity and 2 of 5,000,000-gals. capacity, also electric motors; contemplates opening construction bids in about 30 days.

Tex., El Paso.—City votes Oct. 31 on \$100,000 bonds to improve water-works. Address The Mayor. (Lately noted.)

Tex., Lockney.—City will construct water-works (lately noted) to consist of 100 ft. 8-in. cast-iron pipe; 2½ tons specials; 14 hydrants; one 8-in. and four 6-in. valves with cast-iron valve box; 75,000-gal. tank and tower, 100 ft. to balcony; pumphouse and pumping equipment; bids until Oct. 16; Henry Exall Elrod, Engr., Interurban Bldg., Dallas. (See Machinery Wanted—Water-works.)

WOODWORKING PLANTS

Fla., Branford.—Branford Lumber & Shingle Co., H. W. Taylor, Pres., Live Oak, Fla., purchased plant of Mercer & Bass and is rebuilding. (See Lumber Manufacturing.)

Fla., St. Petersburg.—Wooden Novelties.—Pinellas Novelty Works, capital \$10,000,

incptd.; Jos. B. Williams, Pres.; Frank G. McIntire, V.-P.; Howard K. Haines, Secy.-Treas.; Jos. B. Williams, Gen. Mgr.

Ga., Rome.—Cooperage.—Etowah Cooperage Co., capital \$10,000, incptd. by A. G. Montgomery, R. A. Denny and others.

W. Va., Huntington.—Caskets.—United Casket Co., capital \$10,000, incptd. by G. W. Watts, Fred W. Castle, H. C. Harvey and others; manufacture cloth-covered wooden caskets; later manufacture other varieties.

FIRE DAMAGE

Ala., Florence.—A. J. Phillips' store.

Ark., Conway.—Lynn Mills' residence; loss \$3000.

Ark., Conway.—Heating plant and four rooms at Hendrix College; loss \$10,000.

Ark., Cushman.—Mrs. Eliza Boutwell's residence.

Ark., Patmos.—United Oil Mills' cotton gin; loss \$5000.

Ark., Paragould.—Clarence Cox's residence in S. Paragould.

Ga., Ringgold.—John M. Evtitt's residence, store and livery stable; W. E. Biggers' bungalow.

Ga., Savannah.—Dr. B. W. S. Danah's dwelling; loss \$6000.

Ky., Hopkinsville.—Lawrence Baker's dwelling; loss \$2500.

Ky., Maysville.—Robert Harris' dwelling.

Ky., Paducah.—R. W. Kimbell's residence; loss \$3000.

La., Forest Hill.—Fred. Penlinger's residence, containing telephone exchange; loss \$2000.

La., Jennings.—Mahaffey Hotel owned by Frank B. Williams, New Orleans; loss \$75,000.

La., Lake Charles.—Residences of Frank Warren, L. E. Stanley and Mrs. Theodore Parrott; loss \$10,000.

La., Leesville.—Lewis Bros.' tailor shop; King's Restaurant; loss \$3500.

La., Monroe.—Ouachita State Co.'s dry-kiln; loss of kiln \$3000.

La., Oakdale.—G. H. W. Berry's residence, occupied by L. E. Berry.

Md., Linkwood.—W. M. Brohawn's store and warehouse; loss \$7000; Methodist Episcopal Church (address The Pastor).

Md., Rockville.—Barn, barracks and other buildings on farm of Samuel Riggs; loss \$14,000.

Md., Secretary.—Jas. Krouse's shirt factory; loss \$5000.

Miss., Corinth.—Alcorn County Courthouse; loss \$90,000. Address County Comms.

Miss., Laurel.—William Carter Lumber Co.'s plant, loss \$100,000; Baldwin Mill Works, loss \$20,000.

Mo., Joplin.—Syndicate Mining Co.'s 30-ton mill; loss \$25,000.

N. C., Maxton.—Maxton Gin Co.'s plant.

N. C., Bethel.—Stores of Ward Bros., Robert Station, L. G. Ford & Co. and Mrs. W. H. Bullock.

N. C., Waynesville.—James E. Carraway's residence.

Okla., Kingston.—George Muta's residence; loss \$3000.

S. C., Wiggins.—Savannah River Lumber Co.'s sawmill.

Tenn., Knoxville.—A. Suffridge's residence; loss \$2000.

Tenn., Memphis.—Jorgensen - Bennett Mfg. Co.'s 2 dry kilns, small warehouse and lumber; loss \$20,000.

Tenn., Nashville.—Warehouse and office of Gulf Refining Co. of Louisiana; B. F. Price, Mgr.; J. G. Lauper's 5 dwellings and several other dwellings; total loss \$115,000.

Tex., Aumansville (R. D. from La Grange).—Catholic Church; loss \$20,000. Address The Pastor.

Tex., Anson.—Dr. F. E. Hudson's dwelling; loss \$2000.

Tex., Beaumont.—Residences of H. F. Lindley and R. A. Judd; loss \$3000.

Tex., Dilley.—P. A. Thurmond's residence.

Tex., Eagle Pass.—Mrs. John Boies' tenement; loss \$2500.

Tex., Ennis.—L. J. Weverka's residence; loss \$1700; W. P. Beasley's dwelling; loss \$2800.

Tex., Fort Worth.—J. N. Broker's store building.

Tex., Houston.—Werthan Bag Co.'s plant; Southwestern Paper Co.'s wrapping paper department; total loss \$200,000; both buildings owned by B. A. Riesner, loss \$50,000 to \$60,000.

Tex., Lufkin.—Lufkin Mattress Co.'s fac-

1077; R. J. Evans, owner; estimated loss, \$200.
 Tex., Rockdale.—W. E. Gaither's garage.
 Tex., Sherman.—Cal. T. Freeman's residence; loss \$7000.
 Tex., Temple.—Virgil Waiters' residence.

Tex., Van Leer.—W. T. McGee's saw, planing and heading-mill; loss \$5000.
 Va., Clismont.—"Music Hall," residence owned by Chas. M. Keyser, Keyser, W. Va.
 Va., Lagrange.—S. A. Wilson's bank barn near Lagrange.

BUILDING NEWS

BUILDINGS PROPOSED

APARTMENT-HOUSES

Fla., Miami.—O. B. Sailors, South Bend, Ind., will erect apartment-house; 75x148 ft.; 8 suites; let contract for excavating for foundation to Freedling Construction Co., Miami.

Fla., St. Augustine.—C. S. Smith will remodel dwelling and convert into 2 apartments; also build seawall and fill in lot.

Md., Baltimore.—Mrs. Frances O. Greene, Sandy Springs, Md., purchased dwelling, 1124 W. Lafayette Ave., and will remodel for apartment-house.

S. C., Greenville.—Corrie Killingsworth is reported to erect apartment-house.

Tex., San Antonio.—E. R. Gafford will erect apartment-house; cost \$8500.

Va., Norfolk.—Dr. C. W. Doughtie will erect 2-story brick apartment-house at Lamber Point; 8 apartments; cost \$6000.

Va., Richmond.—Richmond Engineering Co. will erect brick apartment-house; cost \$5000.

ASSOCIATION AND FRATERNAL

Ark., Russellville.—R. P. O. E. will erect lodge building.

Fla., Pensacola.—Y. M. C. A., G. W. Alexander of Executive Com., will probably rebuild navy association building damaged by storm.

Ga., Atlanta.—Railroad Y. M. C. A. will expend \$5000 to improve old Masonic Temple for association building.

Ky., Craftsville.—Southeast Coal Co. will erect Y. M. C. A. building. (See Hotels.)

Md., Hagerstown.—Y. M. C. A. will erect building; 4 stories and basement; 78x192 ft.; brick; steel girders; wood joists; slag roof; vapor or steam heat; cost complete \$130,000; elevators provided for later; probably build foundation this fall; date opening bids not set; A. J. Klinkhart, Mack & Kountz and H. E. Yessler, Associated Archts., Hagerstown. Address C. E. Steele, Secy., Negley Bldg., Hagerstown. (Lately noted.)

S. C., Columbia.—Y. W. C. A. will remodel Seegars' Bldg. for association; plans include 2 reading-rooms, restroom, dormitory to accommodate 25, gymnasium, kitchen and cafeteria; latter to serve 400; Gertrude Chenoweth, Gen. Secy.

Tex., San Antonio.—Y. W. C. A. will erect hostess-house at Kelly Field.

BANK AND OFFICE

Ala., Anniston.—Southern Manganese Corporation will erect office and club building; frame and brick; 39½x81 ft.; cost \$12,000 to \$15,000; Markel & La Roche, Archts., Smith Bldg., Anniston.

Ala., Mobile.—Mobile Cotton & Mercantile Assn. is reported to erect building to replace structure occupied by Mobile Cotton Exchange and Chamber of Commerce and lately noted damaged by fire.

Ky., Craftsville.—Southeast Coal Co. will build office. (See Hotels.)

Ky., Lexington.—Bank of Commerce, I. W. Mantle, Pres., purchased Viley Bldg. and will soon let contract to remodel interior for bank.

La., Coushatta.—People's Bank of Coushatta inceptd. with \$15,000 capital by Jos. Leindecker, Pres.; W. P. Carter, V.-P.; will erect 2-story bank and office building.

Md., Brooklyn.—Davison Chemical Co., Garrett Bldg., Baltimore, has plans by Jas. R. Edmunds, Jr., 908 Munsey Bldg., Baltimore, for office building at Curtis Bay; 2 stories; fireproof; brick and steel; 75x80 ft.; cost \$35,000; construction probably by owner. (Previously noted.)

Okla., Tulsa.—Dr. Samuel G. Kennedy, 205 Gallias Bldg., will enlarge Kennedy Bldg. at 4th St. and Boston Ave.; construct addition 100x149 ft.; 10 stories; cost about \$50,000; A. W. Black & Son, Archts., Security Bldg., St. Louis. (Previously noted.)

S. C., Chesnee.—Citizens Bank of Chesnee,

J. B. Cash, F. H. Weaver and others will erect bank building; details not determined; construction probably begins in spring. (See Machinery Wanted—Bank Fixtures; Safe; Vault.)

Tex., Harrisburg.—American State Bank of Harrisburg, S. D. Simpson, Pres., will erect bank building.

Tex., Jefferson.—T. D. Powell is remodeling office building of Torrains Manufacturing Co.; 2 stories; cost about \$20,000.

Va., Norfolk.—Flat Iron Locality Corp., W. B. and R. F. Baldwin, will not erect building on Flat Iron Square, but is considering erecting another building, definite plans for which have not been decided.

Va., Richmond.—National State and City Bank will repair bank building on East Main St.; cost \$2500.

CHURCHES

Ark., Batesville.—Methodist Church will erect 2-story parsonage. Address The Pastor.

Ark., Luxora.—Methodist Episcopal Church South, Rev. Mr. Greer, Pastor, will erect building.

Fla., Vero.—Catholic Church will erect building. Address The Pastor.

Ga., Milledgeville.—First Baptist Church will enlarge structure. Address The Pastor.

Ga., Sylvania.—Sylvania Baptist Church will receive bids to erect building. Address J. A. Mills or R. W. Selman.

Okla., Quinton.—Missionary Baptists will erect \$5000 building. Address The Pastor.

Tex., Waco.—Central Presbyterian Church will erect building; 70x140 ft.; brick; tile and gravel roof; wood floors; steam heat; cost \$40,000; Ross & Cason, Archts., Waco; will not call for bids; construction to start soon. Address Archts. (Lately noted.)

CITY AND COUNTY

N. C., Lumberton.—City Hall.—Town, Ira B. Townsend, Clerk and Treas., will let contract within few days to erect city hall and fire department building; 42x52 ft.; 2 stories; brick and concrete; slate-hip roof; construction begins in 10 days or 2 weeks; cost \$5000 to \$6000. (Lately noted.)

N. C., Mount Airy.—City Hall.—City is considering erecting city hall; tentative plans call for 2 stories; brick and granite; lower floor for municipal offices; upper, for courtroom with adjoining prison; cost not less than \$5000. Address The Mayor.

Okla., Claremore.—Library.—City receives bids through Board of Directors of Public Library, L. S. Robinson, Pres., City Hall, until Oct. 22 to erect library; brick; Carthage marble trim; steam heat; cost \$10,000; plans and specifications at office Mrs. John Q. Adams, Secy. Bd. of Directors, Claremore. (Previously noted.)

Okla., Hartshorne.—City Hall.—City is considering election on \$25,000 bonds to erect city hall and install filtration plant. Address The Mayor.

Okla., Mountain View.—City Hall.—City will erect city hall. Address The Mayor.

Okla., Miami.—Jail.—Ottawa County is considering election on \$50,000 bond issue to erect jail. Address County Commrs.

Okla., Ponca City.—Poor Farm.—County Commrs. will erect several frame buildings on county poor farm; E. Stalnaker, County Clk.

Okla., Pauls Valley.—Jail.—Garvin County is considering election on \$150,000 bonds to erect courthouse and jail. Address County Commrs.

S. C., Newberry.—Jail.—Newberry County has plans by J. E. Summer, Greenwood, S. C., for jail; 40x90 ft.; brick and concrete; Barrett tar and gravel specification roof; electric lights; steam heat (separate bids for installation); cost \$40,000; bids opened October 30; L. W. Floyd or J. M. Davis, Newberry, may be addressed. (Lately noted.)

Tex., Dallas.—Stock Pound.—City will

erect stock pound in rear fire station; cost \$3000. Address The Mayor.

Tex., Stamford.—City Hall and Fire Station.—R. L. Penick, Mayor, and D. S. Castle, Archt., Abilene, Tex., will receive bids until Oct. 12 to erect city hall and fire station; separate bids for plumbing, heating and electrical work; cost approximately \$25,000.

W. Va., Charleston.—Fire Stations.—City votes Oct. 11 on tax to erect and equip fire stations near Florida St. and Central Ave., Elizabeth and McClung Sts., Bridge and Walnut Aves., and repair Central fire station, install fire-alarm system, etc.; E. M. Surber, City Clerk.

COURTHOUSES

Okla., Pauls Valley.—Garvin County is considering election on \$150,000 bonds to erect courthouse and jail. Address County Commissioners.

DWELLINGS

Ala., Montgomery.—E. W. Crossland will erect 2-story frame residence; cost \$6000.

Ala., Montgomery.—W. J. Naffel will remodel stucco residence; cost \$3500.

Ark., Marion.—S. A. Johnson has plans by Regan & Weller, Memphis, Tenn., for residence; 2 stories; 50x53 ft.; frame; wood shingle roof; wood joist floors; electric lights; cost \$5000; hot-air heat, \$400. Address owner.

D. C., Washington.—Wm. D. Windom, 1723 De Sales St. N. W., will expend \$2000 to remodel dwelling, 1713 De Sales St. N. W.

Fla., Jacksonville.—D. T. Clarke will erect 1-story frame dwelling on Forbes St. and 1-story frame garage; cost \$3600.

Fla., Palm Beach.—Edw. T. Stotesbury, Philadelphia, will not erect villa previously noted.

Fla., St. Augustine.—G. W. Atkinson, Federal Point, Fla., will erect several additional bungalows in Nelmar Terrace.

Ga., Atlanta.—J. W. Ferrell is reported to erect number of dwellings; 6 and 8 rooms.

Ga., Atlanta.—Mrs. P. J. Zempleton will erect 8-room dwelling; cost \$4000.

Ga., Atlanta.—Watt Kelley, Jr., will erect 1-story brick-veneer bungalow; cost \$4000.

Ga., Columbus.—Cliff Averett will erect residence.

Ga., Gainesville.—Wesley Nance acquired R. Palmour residence and will remodel.

Ky., Poor Fork.—United States Coal & Coke Co., Gary, W. Va., and Carnegie Bldg., Pittsburgh, Pa., J. T. Franklin, Asst. Supt., Benham, Ky., will build 1000 dwellings in mining town in Harlan and Letcher counties; 100 eight-room structures now under construction; completion in 15 months; will require 45,000,000 ft. lumber; also erecting temporary commissary building 240x60 ft. for use until permanent brick structure to cost \$100,000 to \$125,000 can be built; Howard N. Evanson, Ch. Engr., Gary.

Ky., Whitesburg.—Smoot Creek Coal Co. will erect 25 miners' cottages at Smoot Creek; will let contracts at once.

Ky., Whitesburg.—Caudill Coal Co. will build 50 additional miners' houses; soon let contract. Address M. S. Moss, Mgr.

La., Monroe.—R. B. Blanks has plans by J. W. Smith, Monroe, for residence; 30x90 ft.; brick; composition shingle roof; hardwood floors and interior finish; electric lights; gas heat; sanitary plumbing; cost \$4000. Address owner. (Lately noted.)

Md., Boonsboro.—M. T. Warrenfeltz will erect dwelling; also erect warehouse.

Md., La. Plata.—R. L. Mitchell, 803 Fidelity Bldg., Baltimore, is receiving bids to erect dwelling; frame; cost \$15,000; Arthur Town, Archt., 708 Linwood Ave., Baltimore.

Md., Sparrows Point.—Bethlehem Steel Co., South Bethlehem, Pa., will erect 10 dwellings for employees; hollow tile; cost \$4000 each.

Miss., Indianola.—W. P. Gresham has plans by Regan & Weller, Memphis, Tenn., for residence; 2 stories; 55x73 ft.; brick veneer; asphalt shingle roof; wood joist floors; hot-water heat; electric lights; cost \$10,000. Address owner.

Miss., Pascagoula.—International Shipbuilding Co., H. H. Roof, Local Mgr., will erect 50 cottages for employees; also erect hotel.

Mo., Kansas City.—E. V. Mittum will erect three 1½-story frame dwellings; cost \$7500.

Mo., Kansas City.—Wells Bros. will erect three 1-story and three 1½-story brick-veneer dwellings; cost \$17,500.

Mo., Kansas City.—John T. Brown will erect dwelling; 2 stories; frame; cost \$2000.

N. C., Asheville.—William J. Bryan, Lincoln, Neb., will erect proposed residence and garage in Grove Park; 11 rooms; cost \$12,300.

Okla., Kingfisher.—W. A. Mitchell has plans by Aurelius-Swanson Co., Oklahoma City, for residence; 7 rooms, 2 baths, halls and porches; frame, tile veneer and stucco; composition and metal tile roof; hardwood floors with ship lap sub-floor; cost \$10,000; hot-water heat, \$1000; contract let Oct. 6. Address owner. (Lately noted.)

Okla., Oklahoma City.—C. E. Hoffman will erect 2-story frame dwelling, 319 W. 19th St.; cost \$7000.

Okla., Oklahoma City.—G. W. Barnett will erect 1-story frame dwelling; cost \$6000.

Okla., Oklahoma City.—C. E. Frye will erect 1-story brick-veneer dwelling; cost \$3800.

Okla., Oklahoma City.—M. F. Rowlett will erect 1-story brick building; cost \$2000.

Okla., Oklahoma City.—M. H. Rhoades will erect two 2-story frame dwellings; cost \$5000 each.

Okla., Oklahoma City.—Walsh & O'Brien will erect 2 tile dwellings on Cardena St.; also 5-room dwelling on Avenue D.; total cost \$6300.

Okla., Oklahoma City.—West & Bright will erect 1-story frame dwelling and frame addition; cost \$2500.

Okla., Oklahoma City.—B. McCormick has plans by Judge Mankin, Oklahoma City, for residence; 26x28 ft.; 29 ft. high; wood; wood shingle roof; hard pine and oak floors; has heat; electric lights; cost \$2500; construction by owner. (Lately noted.)

Okla., Tulsa.—J. D. Simmons will erect lately-noted residence; 32x54 ft.; frame; shingle roof; sub-floor with oak top; furnace heat; cost \$3500; electric wiring and fixtures \$150; plans by owner. (See Machinery Wanted—Building Materials—Flooring.)

Tenn., Memphis.—W. C. Chandler will erect 6-room brick residence; cost \$2750.

Tenn., Memphis.—A. W. Teagh will erect dwelling; 6 rooms; brick; cost \$2750.

Tex., Austin.—Enfield Realty & Home Building Co. will erect 2 dwellings on Lorraine Ave.; brick and shingle; cost \$2300 and \$4000, respectively; also erect dwelling on Windsor road; cost \$4000.

Tex., Kaufman.—W. T. Nash has plans by C. P. Siles, Southwestern Life Bldg., Dallas, for residence; 2 stories; frame; cost \$10,000.

Tex., San Angelo.—James C. Landon, 215 W. Beauregard St., will not erect residence at present. (Lately noted.)

Tex., San Antonio.—B. J. Mezzetti will erect 6-room dwelling.

Tex., San Antonio.—John R. Ford will erect 6-room dwelling; cost \$3500.

Tex., San Antonio.—W. D. Syers will erect 6 dwellings on Anganier Ave.; total cost \$7200.

Va., Berkeley.—(Ind. Station Norfolk).—George Frey will erect four 2-story frame residences; cost \$4000.

Va., Charlottesville.—Elizabeth M. Coombs will erect residence; 10 rooms and 2 baths; hand-drawn shingles; shingle roof; oak floors; furnace and open fireplaces; electric lights; cost \$4000; plans and construction by owner; construction begins Dec. 1.

Va., Charlottesville.—Mendowbrook Mills Golf Club leased 57-acre tract near Charlottesville Country Club and will erect number of cottages; John E. Shepherd, Pres.; R. E. Lee, Secy.

Va., Richmond.—Ada S. Nelson will repair brick dwelling; cost \$2000.

Va., Portsmouth.—C. O. Barclay will erect dwelling; cost \$5000.

GOVERNMENT AND STATE

Ark., Little Rock.—Officers' Quarters.—War Dept., Washington, D. C., will soon let contract to erect building at Belmont for army officers' quarters; cost \$25,000; Frank W. Gibb, Archt., Little Rock.

D. C., Washington.—War Dept. will erect temporary frame buildings in Henry Park for which \$2,000,000 was appropriated; contain 1,655,000 sq. ft. floor space; Col. C. B. Ridley, Engr. in charge of public buildings and grounds.

Fla., Coconut Grove.—Naval Station.—Navy Department, Washington, D. C., will establish naval aviation training station.

Md., Baltimore.—Postoffice.—Treasury Department, Jas. A. Wetmore, Acting Supervising Archt., Washington, D. C., opened bids to alter postoffice at cost of about \$6000; G. Walter Tovell, McCulloh and Eutaw Sts., Baltimore, low bidder. (Lately noted.)

Miss., Gulfport.—Naval Station.—Bureau of Yards and Docks, Navy Dept., Washington, D. C., is receiving bids to construct naval station on Mississippi Centennial Grounds; plans call for total of 130 buildings, including 20 hospitals, 49 buildings for main camp and remainder for detention camp, etc.; construct 9000 yds. shell road covered with bituminous binder, road through drill grounds leading to football and baseball fields, sewerage system, incinerating plant, crescented piling pier 1000 ft. long, with 2 smaller piers nearly 200 ft. long running parallel; dredge channel between these 2 piers for docking training boats; reported cost \$500,000.

Okla., Fort Sill.—Recreation.—City and U. S. Government will expend \$30,000 to erect buildings for recreation at Fort Sill; construction under supervision of L. Stanley Kelley, representative of War Service Commission, Fort Sill.

HOSPITALS, SANITARIUMS, ETC.

Ga., Fort McPherson (R. R. Station, Atlanta).—War Department, Washington, D. C., will install heating system in 4 buildings to be used as part of base hospital; Chas. R. Noyes, Commander 15th Infantry, Fort McPherson. (Previously noted.)

Miss., Gulfport.—Bureau of Docks and Yards, Washington, D. C., is receiving bids to erect hospital, etc. (See Government and State.)

S. C., Spartanburg.—Spartanburg County votes Oct. 9 on tax to establish and maintain hospital; John D. Hamer and others, Commissioners of Election.

Tenn., Knoxville.—East Tennessee Sanitarium, John C. Kern, V. P., proposes to erect tuberculosis sanitarium on farm about 7 miles from Knoxville.

Tex., Fort Worth.—City and Tarrant County have plans by Sanguinet & Staats, Fort Worth, First Natl. Bank Bldg., for additional story to hospital on E. 4th St.; 35x100 ft.; reinforced concrete and brick; composition roof; reinforced concrete floors; cost \$17,000; steam heat, \$2500; will probably let contract to J. C. Buchanan, Fort Worth. (Lately noted.)

Tex., San Antonio.—Board of Managers will soon call for bids to erect additional story to nurses' home at Robert B. Green Memorial Hospital; brick and concrete; cost \$7500.

W. Va., Morgantown.—Monongalia County Commrs. are having plans prepared by Elmer F. Jacobs, P. O. Box No. 376, Morgantown, for infirmary; will probably call for bids about Feb. 1. (Lately noted.)

HOTELS

Ala., Athens.—C. E. Frost has plans by Barnwell & Barnwell, Hamilton National Bank Bldg., Chattanooga, for hotel; 3 stories and basement; brick and steel; gravel roof; marble floors; city electric lights; cement sidewalks; electric drive passenger elevator; bids opened Dec. 20; construction begins Jan. 1; cost \$40,000; steam heat, \$2500. Address owner. (Previously noted.)

Ala., Anniston.—Markel & La Roche, Smith Bldg., Anniston, are reported preparing plans for renovating Anniston Inn.

Ky., Craftsville.—Southeast Coal Co. will build hotel, office, Y. M. C. A. and amusement halls at Millstone; will let contracts at once.

Miss., Pascagoula.—International Ship-building Co. will erect hotel. (See Dwellings.)

Mo., Carthage.—Business Men's League are considering proposition to erect hotel.

N. C., Charlotte.—J. R. G. R. and R. E. Clements leased Buford Hotel property, owned by Union National Bank, and will expend several thousand dollars to improve; plans include installation of heating and plumbing, furnishings, remodeling, etc.

Okla., Muskogee.—O. S. McNeil and E. C. Kelley purchased Turner Hotel and will expend \$6000 to improve interior and redecorate all rooms.

MISCELLANEOUS

Ala., Anniston.—Clubhouse.—Southern Manganese Corporation will erect office and club building. (See Bank and Office.)

Ark., Little Rock.—Amphitheater.—Chamber of Commerce has tentative plans by John P. Almand, Little Rock, for converting old auditorium into amphitheater; cost \$15,000.

D. C., Washington.—Bowling Alley.—Laura C. Rice, 118 C St. S. E., will erect bowling alley 141-43 B St. S. E.; cost \$6000.

Ga., Augusta.—Club Building.—G. Lloyd Preacher, Augusta, is preparing plans for remodeling 13th and 14th floors of Lamar Bldg. for club; will remove several partitions, provide billiard-room, reading-room, sun parlors, roof gardens, etc.

Ky., Craftsville.—Amusement Halls.—Southeast Coal Co. will erect amusement halls. (See Hotels.)

Mo., St. Louis.—Market.—St. Louis Avenue Merchants' Assn. is reported to erect market building.

S. C., Greenville.—Library.—American Library Assn. selected site and will erect library at Camp Sevier; Joseph L. Wheeler, representative American Library Assn., Youngstown, O.

S. C., Hartsville.—Community.—Southern Novelty Co., C. W. Coker, Treas., will build community house for employes.

Tenn., Knoxville.—Home.—Salvation Army will erect home; Ensign Thos. A. Peart may be addressed.

Tenn., Memphis.—Clubhouse.—Young Men's Institute, Edw. F. Longinotti, Secy., is having plans prepared by Richard Regan, Bank of Commerce Bldg., Memphis, for Catholic clubhouse; reported cost \$100,000.

Tex., Fort Worth.—Home.—Central Texas Conference of Methodist Church will erect Charles A. Brown Memorial Home; 2 stories; cost \$3600; Rev. Daniel L. Collier, Agent for Superannuate Homes, may be addressed.

W. Va., Bluefield.—Undertaking Establishment.—Hawkins Undertaking Establishment will remodel building to include white brick front with 4x6-ft. windows on each side and arch doorway; ornamental lights on each side and in front of building.

RAILWAY STATIONS, SHEDS, ETC.

Ga., Savannah.—Savannah & Atlanta Ry., Frank S. Gannon, Pres., is receiving bids to erect warehouse; cost \$20,000.

Ga., Valdosta.—Valdosta, Moultrie & Western R. R. Co., C. L. Jones, Pres., will erect passenger and freight station; construct tracks, etc.

Tenn., Jackson.—Illinois Central Ry. Co., A. S. Baldwin Chief Engr., Chicago, will erect store and oilhouse; portion of building 37x175 ft., 1 story; other part, 37x72 ft., 2 stories; offices for master mechanic in 2-story portion; oil tanks for storage in basement; brick; slate roof; cost \$50,000. (Previously noted.)

Tex., Fort Worth.—Texas & Pacific Ry., C. H. Chamberlin, Ch. Engr., Dallas, postponed erection of terminal passenger station for 1 year; to be operated by number of other railroads entering Fort Worth. (Previously noted.)

Va., Richmond.—Atlantic Coast Line R. R. Co., J. E. Willoughby, Ch. Engr., Wilmington, N. C., deferred erection of freight warehouse, previously noted; plans by G. M. Poley, Wilmington, N. C.

W. Va., Montgomery.—Chesapeake & Ohio Ry. Co., F. I. Cabell, Ch. Engr., Richmond, Va., is not contemplating erection of passenger station at Montgomery at this time. (Lately noted.)

SCHOOLS

Ala., Attalla.—School Board will expend \$3000 for improvements to schools.

Ala., Foley.—Board of Education will erect brick school; plans prepared; voted additional tax.

Ark., Conway.—Hendrix College Trustees will rebuild heating plant and 4 rooms noted damaged by fire at loss of \$10,000.

Ark., Hope.—DeAnne Special District, 10 mi. north of Hope, will erect 2-story brick school building. Address District School Trustees.

Ark., Monette.—Uruel Special School Dist., J. W. Braden, Secy., will erect 2-story brick school.

Ga., Gordon.—Gordon School Dist. will vote on \$25,000 bonds to erect school. Address Dist. School Trustees.

Ga., Louisville.—Board of Education will erect high school; cost \$10,000 to \$15,000; Supt. O. B. Trammell, W. R. Sinesfield and E. N. Willis, Bldg. Com.

La., Ruston.—Lincoln Parish voted bonds to erect school 4 mi. from Ruston; brick; cost \$10,000; bids opened in about 60 days; plans not definitely decided upon; James W. Smith, Archt., Monroe, La. (Lately noted.)

Miss., Fenton.—Trustees are having plans prepared by N. W. Overstreet, Jackson, Miss., for school.

Mo., Cabool.—Cabool School Dist. of Texas County is reported to have voted bonds to erect school. Address Dist. School Trustees.

Mo., St. Louis.—Board of Public Service, John Schmoll, Pres., 304 New City Hall, will erect school at Robert Koch Hospital; bids opened Oct. 9.

N. C., Greensboro.—Fentress Township votes Nov. 10 on \$40,000 bonds to erect brick high school and improve other schools. Address Guilford County Commrs. (Bonds previously noted voted declared invalid.)

N. C., Wilson.—Wilson County School Dist. No. 5 voted \$5000 school bonds; Chas. L. Coon, Supt. of Schools. (Previously noted.)

Okla., Alluwe.—Alluwe School Dist. voted \$15,000 bonds to erect school. Address Dist. School Trustees.

Okla., Ardmore.—Carter County will erect 2-story brick school; J. B. White, Archt., Ardmore. (Lately noted.)

Okla., Bartlesville.—Ringo School Dist. No. 24 will erect school. Address County Supt. County Commrs., J. C. Mitchell, Clk., will erect Dunbar School.

Okla., Cloud Chief.—Trustees will erect school. Address F. D. Ford.

Okla., Frisco.—School Board, J. W. Thompson, Clk., will erect brick school.

Okla., Oklahoma City.—City will vote on bonds to erect school and improve fire department. Address The Mayor.

Tex., Cameron.—Conley School Dist. and Duncan School Dist. each voted \$2000 bonds to erect schools. Address Dist. School Trustees.

Tex., El Paso.—City votes Oct. 31 on \$100,000 school bonds. Address The Mayor.

Tex., Orange.—City is considering election on \$75,000 bonds to erect fireproof addition to Anderson school and other improvements; George W. Curtis, Secy. School Board.

Va., Pungo.—Seaboard District, Princess Anne County, has plans by Rossel Edward Mitchell, Norfolk, for school; 52x64 ft.; 2 stories; frame; slate roof; wood oak finish floors; cost \$10,000. Address L. H. Hill, Princess Anne, Va. (Previously noted.)

W. Va., West Liberty.—State Board of Control, E. V. Stephenson, Charleston, West, rejected all bids to erect dormitory at West Liberty Normal School; ordinary brick and wood construction; composition roof; 56,10x151.10 ft.; 3 porches; F. F. Faris, Archt., Wheeling. (Previously noted.)

Okla., Schuler.—School Board, Consolidated Dist. No. 7, will erect 8-room stone school; H. F. Hall, Archt., 37 Severs Bldg., Muskogee, Okla. (Previously noted.)

Okla., Prague.—County Commrs., Pawhuska, Okla., will erect school. Address J. A. Gleason, care of Kelly-Gleason Furniture Co., Pawhuska.

Okla., Okmulgee.—School Board will erect 8-room stone school building; H. F. Hall, Archt., 37 Severs Bldg., Muskogee, Okla.

Okla., Mountain Park.—School Board, Dist. No. 88, will erect 2-room school; H. W. Beans, Clk.

W. Va., Moundsville.—Board of Education of Moundsville Ind. School Dist. rejected all bids to erect high school; fireproof; 20 classrooms; domestic science and manual training equipment; composition roof; reinforced concrete floors; steam heat; electric lights; cost about \$150,000; Edward Bates Franzheim, Archt., Wheeling. (Previously noted.)

STORES

Ala., Birmingham.—Birmingham Delicatessen Co. inceptd.; will enlarge and remodel building.

Ala., Mobile.—T. G. Bush Grocery Co. will probably erect building to replace structure lately noted damaged by fire.

Ala., Mobile.—Brown & Brown are reported to erect building to replace structure lately noted damaged by fire at loss of \$50,000.

Ark., Conway.—J. C. Dawson is erecting 2 brick business buildings.

Ark., Texarkana.—W. C. Hardin will improve Hardin Building for McWilliams-Sain Drug Co.; install plate-glass front and sides, mosaic tile floor, steel ceiling and woodwork.

Fla., St. Petersburg.—Ed. T. Lewis will erect store building; 16x18 ft.; 1 story; fireproof; 6 storerooms.

Fla., St. Petersburg.—J. F. Harris will erect 1-story concrete business building.

Fla., Tarpon Springs.—J. R. West will erect addition to store building; brick; 26x28 ft.

Ga., Atlanta.—Massell Realty Co. will erect 3-story brick business building; cost \$5000.

Ky., Poor Fork.—United States Coal & Coke Co., Gary, W. Va., and Carnegie Bldg., Pittsburgh, Pa., J. T. Franklin, Asst. Supt., Benham, Ky., will build temporary com. \$125,000; Howard N. Evanson, Ch. Engr., Gary.

La., Alexandria.—A. N. Moore is erecting 1-story brick business building; cost \$2500.

La., Alexandria.—Leckie & Sass are erecting brick and frame business building; cost \$2000.

La., Alexandria.—Central Drug Co. will expend \$4000 to remodel building.

Miss., Belonzi.—B. Sherbert will remodel store building.

Miss., Catchings.—A. M. Cohn will build store.

Miss., Columbus.—H. Hirsham will erect department store building.

Miss., Hattiesburg.—Duff & Lee will remodel drug store building.

Miss., McComb.—H. D. Woods will remodel store and install new front.

Mo., Kansas City.—H. A. Eisberg will erect 1-story brick business building; cost \$3000.

N. C., Asheville.—J. H. Manley will erect 2-story business building; cost \$4000.

N. C., Gastonia.—National Realty Co. will erect 2 store buildings; 17x100 ft.

Okla., Okeene.—C. Laubach will erect brick business building.

Okla., Miami.—J. W. Roberts is preparing plans for 5-story fireproof business building.

Okla., Quapaw.—W. H. Rosenow has plans by William Robinson, Vinita, Okla., for 3 store buildings, 25x50 ft. each, with 10 offices on second floor; brick; gravel roof; first floor tile; upper floors wood; electric wiring; cost \$10,000; contract let in few days. (Lately noted.)

Tex., Abilene.—Fulwiler Electric Co. is having plans prepared by D. S. Castle, Abilene, for 1½-story business building; 30x30 ft.; cost \$15,000.

Tex., Dallas.—W. C. Holland will erect 1-story brick store; cost \$10,000.

Tex., Dallas.—George Loudermilk will remodel store at 1931-33 Main St.; also building at 2016-18 Main St.; cost \$3700.

Tex., Denton.—W. B. McClurkin & Co. are reported to erect several business buildings.

Tex., Marfa.—Alamo Lumber Co. is erecting store building; 1 story; brick; 50x120 ft.; cost \$5000.

Tex., Plainview.—C. A. Bowron will erect business building.

Tex., San Antonio.—J. G. Collins Co. will remodel building at 312 E. Houston St.; cost \$40,000, including fixtures.

Va., Staunton.—Willson Bros., 18 W. Main St., will remodel building; 3 stories; brick; install tile floor and new fixtures; cost \$10,000.

W. Va., Fayetteville.—C. G. Janutolo will remodel building for Dr. Christian to be occupied by Christian Pharmacy; remodel glass front, provide tile floor, steel ceiling, etc.

THEATERS

Ala., Anniston.—McClellan Land Co. will build \$9000 theater near Camp McClellan; Markel & La Roche, Archts., Smith Bldg., Anniston.

Ky., Louisville.—Casino Theater Co. inceptd. with \$3000 capital by M. Switow, Joseph L. Steuerle and Sam Switow.

Md., Baltimore.—John Henry Nickel, 709 E. Baltimore St., will remodel Monumental Theater on Baltimore St.

Mo., Kansas City.—Overland Amusement Co. has plans by Frederic E. McIlvain for Liberty Theater; fireproof; polychrome terra-cotta; red tile roof; seating capacity 1200; construction under supervision of Hughes Bryant.

N. C., Charlotte.—F. T. Montgomery and associates leased Academy of Music and will expend several thousand dollars to remodel for vaudeville theater.

Okla., Ada.—C. A. Zorn and B. B. Howard postponed erection of opera house lately noted.

S. C., Paris, R. D. from Greenville.—Paris Amusement Co. inceptd. with \$10,000 capital by W. C. Cleveland, C. O. Hobbs, S. A. Quinnyer and others, will erect theater for moving pictures, vaudeville, etc.; seating capacity 2500.

Tex., Dallas.—J. A. Creesey and others have plans for \$500,000 moving-picture theater on Pacific Ave.; seating capacity 3000; 18-ft. arcade entrance on Elm St. (Previously noted.)

Va., Berkley (Ind. Station Norfolk).—J. C. Johnson & Bro. have permit to alter store building for moving-picture theater; cost \$300.

WAREHOUSES

Ark., Newport.—R. J. Hugley will erect warehouse.

Fla., Miami.—H. C. Gardner is reported to erect warehouse.

Ga., Columbus.—M. P. Walsh of Florida Farms & Homes Co., Palatka, Fla., proposes to erect food crop warehouse.

Ga., Savannah.—Savannah & Atlanta Ry. is receiving bids to erect warehouse. (See Railway Station, etc.)

Ky., Louisville.—American Tobacco Co. will erect brick addition at 30th & Madison Sts.; cost \$250.

Ky., Maysville.—Farmers & Planters' Tobacco Warehouse Co. Incptd. with \$25,000 by A. L. Powers, W. Holton Key and A. M. Janney.

Md., Baltimore.—William C. Robinson & Son Co., 32 South St., will erect \$10,000 addition to warehouse at Dock and Caroline Sts.; 2 stories; brick; 53x29 ft.; also enlarge and improve garage, 1422-24 Block St.; slag roof; steam heat; total cost \$19,000.

Md., Boonsboro.—M. T. Warrenfeltz will erect warehouse. (See Dwelling.)

Mo., Kansas City.—O. J. Mustion Wool

Co. will erect warehouse; reinforced concrete.

Okla., Oklahoma City.—J. I. Case Implement Co. will erect 1-story sheet-iron storage building; cost \$3700.

Okla., Okemah.—Callison Bros. will erect sweet potato storage warehouse; 26x68 ft.; cost \$2000.

S. C., Columbia.—W. Gordon McCabe, Jr., has plans by J. B. Urquhart, Columbia, for cotton warehouse; mill construction; brick walls; 4 stories; 16 compartments; capacity 1000 bales each; cost \$50,000.

S. C., Union.—Bailey Undertaking Co. will erect warehouse workshop.

Tenn., Cleveland.—Hannah-Jarnagin Co. will erect warehouse; 75x90 ft.; 3 stories and basement; brick; roofing not decided; first floor concrete, balance oak; hot-water heat; electric elevator; cost \$15,000; construction begins in early spring. (Lately noted.)

Tex., Bay City.—Le Tulle Mercantile Co. will erect fireproof elevator and warehouse building; 150x140 ft.; elevator proper to be 4 stories with capacity of 20 cars; warehouse capacity 30 cars.

Tex., Jefferson.—G. D. Neidemer is remodeling cotton warehouse; 2 stories; 50x140 ft.; cost \$10,000.

Va., Richmond.—Export Leaf Tobacco Co. will expend \$3000 to repair brick building, 900 N. Lombardy St.

City, to erect residence; 20x40 ft.; brick and frame; wood roof; frame floor construction; hot-air heat; electric lights; concrete sidewalks; cost \$6500. (Lately noted.)

S. C., Anderson.—Brogan Cotton Mills let contract to Builders' Lumber & Supply Co., D. Brown, Mgr., Anderson, to re-cover 30 cottages with No. 1 heart pine shingles.

S. C., Anderson.—Orr Cotton Mills let contract to Builders' Lumber & Supply Co., D. Brown, Mgr., Anderson, to re-cover 25 cottages with No. 1 heart pine shingles.

S. C., Anderson.—Toxaway Mills let contract to Builders' Lumber & Supply Co., D. Brown, Mgr., Anderson, to re-cover 25 cottages with No. 1 heart pine shingles.

Tenn., Memphis.—T. B. Duncan let contract to Union Construction Co., Memphis, to remodel and erect 2-room addition to dwelling; cost \$3000.

Tex., Beaumont.—M. J. Ebberts let contract to F. J. Calhoun, 2409 Magnolia Ave., Beaumont, to erect residence; 62x26 ft.; 8 rooms; concrete and brick foundations and frame; heart cypress shingle roof; mill construction; cost \$10,000; Babin & Beck, Architects, Beaumont. (Lately noted.)

Tex., Beaumont.—E. L. Shattuck let contract to McBride & Law, Beaumont, to erect 2-story hollow-tile residence; cost \$5000; C. A. Logan, Archt., Beaumont. (Lately noted.)

Tex., Taylor.—M. R. Kennedy let contract to Haston Bros., Taylor, to erect 3-story and basement residence; 12 rooms; press brick; clay-tile roof; oak and tile floors; brick mantels; metal porch columns; electric fixtures; cost \$25,000; R. L. Thomas, Archt., 602 Scarborough Bldg., Austin.

Tex., Waxahachie.—Dr. L. H. Graham let contract to erect residence; cost \$4000.

Tex., Waxahachie.—D. B. Bullard let contract to erect \$10,000 residence to replace burned dwelling.

Va., Portsmouth.—E. H. Hughes let contract to J. W. Hoffer, Portsmouth, to erect 2-story frame dwelling; cost \$2300.

HOTELS

Ark., Little Rock.—W. F. Ault, Little Rock, general contractor to erect Marion Hotel annex, let following sub-contracts: Marble and tile work, Southwestern Marble & Tile Co.; plaster, C. B. Humphrey; painting, Rexer & Dempsey; millwork, Cochran-Foster Lumber Co.; plumbing and heating, M. B. Sanders; electric wiring, Arkansas Electric Co.; all of Little Rock; plans by Mann & Stern, Little Rock, call for 8 stories and basement; 165 rooms; fireproof; reinforced concrete and brick; tar and gravel roof; reinforced concrete floor construction; vacuum heat; electric lights; reinforced concrete columns; cost \$150,000. (Previously noted.)

Fla., Tampa.—Mrs. Fannie Haya let contract to M. F. Lopez, Tampa, to erect 2-story brick building; 72x95 ft.; pressed brick; stone trim; solar heating system; lower floor for stores; second for hotel; cost \$30,000; Francis J. Kennard, Archt., Tampa.

Ga., Augusta.—Hampton Terrace Hotel Co., James V. Jackson, Pres., let contract to Caldwell & Sons Co., to rebuild Hampton Terrace Hotel; fireproof; 250 guest rooms; exterior modified Flemish, faced with red mat-faced brick; blue slate roof; fire escapes; elevators inclosed in fireproof shafts; locker-rooms, showers, etc., in basement; lobby with marble floor, American walnut wainscoting, trim, pillars, clerk's desk, etc.; Caen stone finish in convention-room on second floor; cost \$750,000; Brinton B. Davis, Archt., Louisville, Ky.

MISCELLANEOUS

Ark., Texarkana.—Stable.—Young & Flow let contract to O. M. Mitchell, Texarkana, to construct 1-story brick sales stable; 90x140 ft.; earth floor; composition roof.

Fla., St. Cloud.—Library.—Ladies' Improvement Club, Mrs. C. K. Hendrix and others, are interested in erection of public library for which H. E. Hedrick has contract to erect; pressed brick; cost \$5500.

Fla., Vero.—Restaurant.—J. H. Baker has contract to erect addition to Twitcheil Bldg. for restaurant and apartments; 2 stories; frame; 25x60 ft.

Ky., Melbourne.—Mother House, etc.—Sisters of Providence are reported to have let contract to McDermott-Maxon Co., Builders' Exchg. Bldg., Cincinnati, to erect administration building and mother house; 3 stories; 92x25 ft.; cost \$200,000.

Md., Baltimore.—Restaurant.—Henry Dunlock, 757 W. Baltimore St., let contract to Milton C. Davis, 902 W. 36th St., Baltimore, to alter 3-story brick restaurant at 754 W. Baltimore St.; 25x80 ft.; tin roof; wood and tile floors; gas heat; electric lights; cost \$3000; J. Edw. Laferty, Archt., 11 E. Pleasant St., Baltimore. Address Contractor.

Okla., Oklahoma City.—Livestock Pavilion. Gross Construction Co., Oklahoma City, has contract to construct stage for livestock pavilion at fair grounds; 80x50 ft.; cost \$2000.

BUILDING CONTRACTS AWARDED

APARTMENT-HOUSES

Fla., St. Petersburg.—J. I. Ward let contract to Beard & French, St. Petersburg, to erect 2-story 4-suite apartment-house; cost \$3000.

Fla., Vero.—J. H. Baker has contract to erect addition to building for apartments, etc. (See Miscellaneous.)

ASSOCIATION AND FRATERNAL

Md., Admiral.—Women's Business Council, Y. W. C. A., 128 W. Franklin St., Baltimore, let contract to Claiborne, Johnston & Co., 90 Garrett Bldg., Baltimore, to erect hostess' house at Camp Meade; 2 stories; frame; 78x40 ft.; Jas. E. Ware & Sons, Architects, 1171 Broadway, New York.

Tex., Wichita Falls.—National War Works Council, Y. M. C. A., let contract to Mr. Wass, Lawton, Okla., to erect Y. M. C. A. building at Aviation Camp; 90x150 ft.; lumber; composition roof; cost \$4000; C. M. Miller Lumber Co., Wichita Falls, has contract for lumber. (Lately noted.)

BANK AND OFFICE

La., Lake Charles.—First National Bank let contract to P. Oliver & Son to remodel and erect addition to building; also let contract to Wenar & Sons, New Orleans, for fixtures; plans include 15-ft. addition, extra corridor, row of cages, remodeling interior, etc.; cost \$25,000.

Md., Baltimore.—Hess Steel Corp., Loney's Lane and Pennsylvania R. R., let contract to Crowell-Lundoff-Little Co., Cleveland, O., to erect office building; 2 stories; 40x80 ft.; concrete; composition roof; wood-finish floors on concrete; cost \$25,000; vacuum heat, \$4000; electric wiring and fixtures, \$1500; plans by owner. (Lately noted.)

N. C., Charlotte.—Union National Bank let contract to Blythe & Isenhour, Charlotte, to enlarge and remodel bank building; install plate-glass window and fixtures; convert frontage of about 100 ft. on E. Fourth St. into 5 stories; plate-glass windows, etc.; cost \$5000; L. L. Hunter, Archt., Charlotte.

Va., Boiesvain.—Pocahontas Fuel Co., Pocahontas, Va., let contract to erect office building. (See Warehouses.)

Va., Jenkin-Jones.—Pocahontas Fuel Co., Pocahontas, Va., let contract to erect office building. (See Warehouses, Va., Boiesvain.)

CHURCHES

Ga., Hawkinsville.—Baptist Church let contract to S. F. Fulghum & Co., Macon, to erect building; pressed brick; 1 story and basement; 60x25 ft.; cost about \$30,000; Jas. J. Baldwin, Archt., Anderson, S. C. (Previously noted.)

N. C., Henderson.—First Baptist Church let contract to W. A. Fogelman to erect building; granite; cost \$50,000 to \$60,000; J. M. McMichael, Archt., Charlotte, N. C. Address J. C. Kittrell, Henderson. (Lately noted.)

Okla., Stillwater.—Christian Church let contract to Marshall & Bethel, Stillwater, to erect 2-story and basement brick building; 71x19 ft.; cost \$2500.

CITY AND COUNTY

Md., Brooklyn.—Police Station.—Anne Arundel County Commrs., Annapolis, Md., let contract at \$10,265 to Clarence E. Stubbs, 548 Equitable Bldg., Baltimore, to alter and erect addition to police station; let contract for steel work on additional cells at \$2470 to Van Dorn Iron Works Co., 2700 Seventy-ninth St., Cleveland, Ohio; approximately 29x43 and 16x18 ft.; ordinary masonry; part concrete and steel beams for floors; slag roof; wood joist floor construction; steam heat; H. G. Crisp, Archt., 2709 St. Paul St., Baltimore. (Lately noted.)

Okla., Maysville.—Jail.—County Commrs. let contract to M. Webb to erect jail.

Tex., El Paso.—Jail.—City let contract to H. L. Ponsford & Sons, El Paso, to erect jail addition; 30x40 ft.; 2 stories; composition roof; brick walls; first floor cement; second floor wood; cost \$3300; Braunton & Leibert, Architects, Martin Bldg., El Paso. (Lately noted.)

DWELLINGS

Ark., Blytheville.—J. D. Johnson let contract to W. M. Vick, Blytheville, to erect residence; 43x66 ft.; 1 story; frame; asphalt shingle roof; wood joist floor construction; electric lights; cost \$4000; Regan & Weller, Architects, Memphis, Tenn.

Fla., Homestead.—Geo. Fuller has plans by and let contract to Frank Wiggins, Redland, Fla., to erect residence; 1 story; bungalow type; frame; slate surface roofing paper; Florida pine floors; gas engine for lighting and water plant; cost \$1500. (Lately noted.)

Fla., St. Petersburg.—Mrs. Fay D. Sparks, Sabina, O., let contract to Mr. Kiplinger, St. Petersburg, to erect 6-room bungalow.

Ga., Brunswick.—S. K. Brown let contract to J. G. Conzelman, Brunswick, to erect 4 residences; 5 rooms and bath; frame; slate composition roof; city electric lights.

Miss., Clarksdale.—J. H. Smith let contract to Wm. Morford, Clarksdale, to erect residence; 6 rooms; 1½ stories; wood; asphalt shingle roof; wood floors; grates and mantels; electric lights; cost \$4000.

Miss., Grenada.—S. M. Cain let contract to C. E. Lockett, Grenada, to erect residence; 36x66 ft.; brick veneer; composition shingle roof; oak and pine floors; tile kitchen floor; concrete porch floor; city electric lights; cost \$2000; hot-water heat, \$1000; Mahan & Broadwell, Architects, Germania Bank Bldg., Memphis, Tenn. (Lately noted.)

Miss., Tunica.—H. D. Hyer let contract to J. E. Wright, Memphis, Tenn., to erect residence; 1 story; 31x63 ft.; frame; asphalt shingle roof; wood joist floors; electric lights; cost \$3500; Regan & Weller, Architects, Memphis.

Okla., Oklahoma City.—W. R. McWilliams has plans by and let contract to C. W. Welborn, 408 Scott-Thompson Bldg., Oklahoma

HOSPITALS, SANITARIUMS, ETC.

Ga., Atlanta.—Georgia Baptist Hospital let contract to Moody, Walker & Queen, Atlanta, to erect 2-story and basement brick addition; 60x40 ft.; cost \$15,000; John C. Battle, Archt., Grant Bldg., Atlanta.

Tenn., Memphis.—Tri-State Baptist Board let contract to James Alexander Construction Co., Memphis, to erect 8-story annex to hospital; 78x150 ft.; reinforced concrete; brick walls; composition roof; cement, tile and hioleum floors; cost \$200,000; lighting, \$3000; heating, \$25,000; plumbing, \$23,000; elevator, \$4000; H. J. Harkey, St. Louis and C. O. Pfeil, Memphis, Architects. Address Contractor. (Previously noted.)

RAILWAY STATIONS, SHEDS, ETC.

Ala., Decatur.—Southern Express Co. let contract to W. A. Schloss, Cullman, Ala., to erect express office; 29x78 ft.; brick; tile roof; concrete floors; cost \$5000; completion in 90 days. (Lately noted.)

Tex., Brenham.—Houston & Texas Central R. R. Co. let contract to J. O. Polhemus, Austin, Tex., to erect freight depot; 30x185 ft.; brick and frame; tar and gravel roof; wood floors; cost \$12,000; plans by H. F. Jones, Ch. Engr., Houston. (Lately noted.)

W. Va., Mullens.—Virginian Rwy. Co., Norfolk, Va., let contract to English Sash & Lumber Co., Altavista, Va., to erect additional freight and passenger facilities; frame; oriental shingle roof; cost \$3200. (Lately noted.)

SCHOOLS

Ala., Marbury.—State Board of Education, Montgomery, let contract to W. B. Harper, Mt. Creek, Ala., to erect school; 2 stories; 75x40 ft.; frame; shingle roof; double pine floors; electric lights; heaters; cost \$2500; Frank Lockwood, Archt., Montgomery. (Lately noted.)

Ark., Conway.—Trustees of State Normal School let contract to W. F. Ault, Little Rock, Ark., to erect administration building at State Normal School; brick and steel; 3 stories; 70x200 ft.; tropical roofing; concrete and joist floor construction; cost \$90,000; John P. Almand, Archt., Little Rock. (Lately noted having let lighting and wiring contract to Casey & Naylor, Little Rock.)

Ark., Eight Mile.—Eight Mile District School Trustees let contract to J. Hutchins,

Beedeville, Ark., to erect building; cost \$3000. (Lately noted.)

Md., Riverdale.—School Board of Prince George County let contract to L. H. Eckhardt, 1320 N. Carlisle St., Philadelphia, to erect schools at Riverdale and near Mullikin Station; 116x32 ft. with 2 wings; brick; steel sash; asphalt shingle roof; wood floors; steam heat cost \$16,500 each; Bart Tourison, Archt., 1039 Land & Title Bldg., Philadelphia. (Previously noted.)

Okla., Choctaw.—Consolidated School Dist. No. 4 let contract to M. A. Swateck Co., Oklahoma City, to erect school; 63x75 ft.; brick; stone trim; felt and gravel roof; wood floors; cost \$15,000; steam heat, \$3000; electric lights (private plant), \$200; Edw. J. Peters, Archt., Shawnee, Okla. (Lately noted.)

Okla., Shawnee.—School Board let contract to Cowan & Scott, Shawnee, to erect 8-room ward school building; cost \$22,900; also let contract to G. P. Carr, Shawnee, to erect 2-room ward school; cost \$6600; A. C. Davis, Shawnee, Archt. for both schools.

Okla., Stafford.—School Board let contract to Littrell Construction Co. to erect school building; 2 stories; brick; cost \$12,000; Hawk & Parr, Archts., Oklahoma City, and First State Bank, Clinton, Okla. (Lately noted.)

S. C., Bishopville.—School Board, E. D. Reams, Secy., let contract to W. W. Blair, Chester, S. C., to erect school; brick; composition roof; electric lights; 6 classrooms and auditorium; cost \$20,000, exclusive of plumbing and wiring; heating contract not let; contract for plumbing let to G. T. Bryson, Florence, S. C.; J. H. Johnson, Archt., Sumter, S. C. (Previously noted.)

Tenn., Chattanooga.—University of Chattanooga let contract to Henry O'Brien, Chattanooga, to erect chapel and science building; brick and stone; slate roof; wood and cement floors; steam heat; electric lights; W. T. Downing, Archt., Atlanta; construction begins Nov. 1. Address contractor. (Lately noted.)

Tex., Crosbyton.—School Board let contract to Hess Bros. to erect 2-story brick school building; cost \$35,000; J. C. Berry, Archt., Crosbyton.

W. Va., Barboursville.—Morris Harvey College let contract to Geo. Watts, Huntington, W. Va., to erect addition to music hall for classrooms; 2 stories; 18x40 ft.; brick; composition roof; wood floors; cost \$2500. (Lately noted.)

STORES

Ark., Williford.—Williford Drug Co. let contract to James Robinson to erect concrete store building.

D. C., Washington.—Thomas Atkinson let contract to William Todd, 1406 G St. N. W., Washington, to erect business building, 1341 F St. N. W.; cost \$15,000.

D. C., Washington.—Hecht & Co. let contract to Andrew Murray, 729 Twelfth St. N. W., Washington, to erect brick addition, 519 Seventh St. N. W.; cost \$17,400.

D. C., Washington.—Pauline V. Bevera let contract to Walter Avery, 632 G St. N. W., Washington, to remodel store, 906 G St. N. W.; cost \$3000; Cloughton West, Archt., 217 Colorado Bldg., Washington.

Fla., St. Petersburg.—J. B. Graven let contract to Charles DuBois, St. Petersburg, to alter building; cost \$2100.

Fla., Tampa.—Mrs. Fannie Haya let contract to erect building; lower floor for stores. (See Hotels.)

La., Alexandria.—Hemeway Furniture Co. let contract to H. Sterkx, Alexandria, to erect concrete and brick business building; cost \$30,000.

Md., Baltimore.—Sophia Hauswald, 2700 Edmondson Ave., let contract to George F. Smith to erect 1-story store addition to store at 2820-22 Edmondson Ave.; cost \$3000.

N. C., Charlotte.—Union National Bank let contract to convert portion of building into stores. (See Bank and Office.)

N. C., Gastonia.—National Realty Co. let contract to H. B. Pattillo, Gastonia, to erect 2 store buildings; 17½x110 ft.; dark red texture brick fronts; marquee awnings; Wilson & Sompayrac, Archts., Columbia, S. C.

Okla., Stillwater.—Payne Company let contract to Lisle Dunning Construction Co., Oklahoma City, to erect 4-story concrete and brick business building; 85x37 ft.; cost \$125,000; Hair-Tonini & Bramblet, Archts., Oklahoma City.

Tenn., Memphis.—R. F. Baggan let contract to C. H. Sims, Memphis, to construct basement and repair building at 23 S. Idlewild St.; cost \$2350.

Tex., Amarillo.—Kansas Blackleg Serum

Co. has plans by Fred. K. Bone, and let contract to Bone Construction Co., both of Amarillo, to erect 1-story brick and tile building; 30x50 ft.; cost \$12,000.

Tex., Crosbyton.—Webb & Britt let contract to Hess Bros. to erect 1-story brick business building; 45x130 ft.; cost \$25,000; J. C. Berry, Archt., Crosbyton.

Va., Berkley (Ind. Station Norfolk).—A. Legum let contract to J. C. Johnson & Bros., Norfolk, to erect brick addition to building on Liberty St.; cost \$3000.

Va., Boissevain.—Pocahontas Fuel Co., Pocahontas, Va., let contract to erect store and office building. (See Warehouses.)

Va., Jenkin-Jones.—Pocahontas Fuel Co., Pocahontas, Va., let contract to erect store building. (See Warehouses, Va., Boissevain.)

WAREHOUSES

Ga., Columbus.—Swift Spinning Co. let contract to T. C. Thompson & Bros., Charlotte, N. C., and Columbus, to erect brick addition to warehouse; cost about \$6000.

Ky., Louisville.—Louisville Public Warehouse Co. let contract to L. Koerner & Co., Louisville, to erect warehouse for storing tobacco in hogheads; 2 buildings 160x240 ft. each; frame; iron clad; composition roof; cost \$40,000; D. X. Murphy & Bro., Archts., Louisville. (Lately noted.)

Tex., Plainview.—C. E. White Seed Co. let

contract to erect seedhouse; brick; 25x140 ft.; cost, including fixtures, \$10,000.

Va., Jenkin-Jones.—Pocahontas Fuel Co., Pocahontas, Va., let contract to erect warehouse. (See Va., Boissevain.)

Va., Boissevain.—Pocahontas Fuel Co., Pocahontas, Va., let contract to D. J. Phipps, Roanoke, to erect warehouse and store and office building at Boissevain; former, 90x120 ft.; 2 stories and basement; brick and reinforced concrete; fireproof; Barrett specification roof; concrete floors; 1-pipe low-pressure steam heat; electric lights and elevator; latter 100x120 ft.; 2 stories and basement; fireproof; brick; Barrett specification roof; concrete, tile and cork floors; 1-pipe low-pressure steam heat; electric lights and elevator; also let contract to same contractor to erect store and office buildings and warehouse at Jenkin-Jones, Va.; store building, 120x47 ft.; 2 stories; fireproof; brick and reinforced concrete; Barrett specification roof; concrete, tile and cork floors; 1-pipe low-pressure steam heat; electric lights and elevators; office building 120x47 ft.; 2 stories and basement; fireproof; brick; Barrett specification roof; concrete floors; 1-pipe low-pressure steam heat; electric lights and elevator; total cost of all structures \$300,000 to \$325,000; Alex. B. Mahood, Archt., Bluefield, W. Va.

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Manufacturers and others in need of machinery or supplies of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery or supplies needed we will make their wants known free of cost, and in this way secure the attention of manufacturers and dealers throughout the country. The Manufacturers Record has received during the week the following particulars as to machinery and supplies wanted.

"WANTS"

Bank Fixtures.—J. B. Cash, Citizens' Bank of Chesnee, Chesnee, S. C.—Prices on safe, vault and other bank fixtures.

Bank Fixtures.—Farmers & Merchants' Bank, W. I. Halstead, Prest., South Mills, N. C.—Prices on safe, vault and other bank fixtures.

Bank Fixtures.—West End Investment Co., Dr. W. C. Gwin, Prest., Birmingham, Ala.—Prices on safe, vault and other bank fixtures.

Boiler.—See Engine and Boiler.—Riverside Sand Co.

Boilers (Water Tube).—Suwanee Iron Co., Grand Rivers, Ky.—Will buy 750 H. P. water-tube boilers.

Boilers.—Branford Lumber & Shingle Co., H. W. Taylor, Prest., Live Oak, Fla.—Two or three 72x18 boilers, complete with stacks, fittings, etc.; second-hand; for installation Branford, Fla.

Bridge Construction.—Fort Loudon Bridge Co., J. C. Anderson, Prest., Vonore, Tenn.—Bids until Oct. 25 to construct steel bridge across Little Tennessee River at Indian Rock near McGhee, Tenn.; for further information address Mr. Anderson.

Bridge (Steel) Construction.—Dallas Southwestern Traction Co., John T. Witt, Ch. Engr., 304 Gaston Bldg., Dallas, Tex.—Bids until Nov. 6, for opening Nov. 7, to construct steel bridge and concrete approaches across Trinity River; plans and specifications obtainable for \$25.

Bridge Construction.—Independence County, J. H. Jimerson, County Judge, Batesville, Ark.—Bids Nov. 13 at Main St. door of Courthouse to construct highway bridge on Lowe Creek, 60-ft. span and 16-ft. roadway, White River Township; plans and specifications on file with County Clerk.

Bridge Construction.—Maryland State Roads Commission, 601 Garrett Bldg., Baltimore, Md.—Bids until Oct. 16 on contract No. Ce-24, Cecil County, reconstruction slab bridge on State road near Bacon Hill; 2 spans, 13 ft. 6 in. in clear; plans and specifications obtainable from Commission.

Building Materials.—J. D. Simmons, Tulsa, Okla.—Prices on building material for \$3500 residence, to include oak floors and casings, window sash and doors and hardwood trim.

Cars (Mine).—Roy Coal Co., Lee Kilgore, Prest., Coeburn, Va.—Prices on mine cars; installation Norton, Va.

Castings (Iron).—R. W. Banks, Jr., Shreveport, La.—Cast ratchet wheels, about 3½ in. diam.; small castings of balls similar to clappers of bells; will furnish blueprints.

Cement-working Machinery.—See Woodworking Machinery, etc.—Geo. H. Dieringer.

Chemicals (Moss Curing).—Geo. J. Feeel, P. O. Box 166, Beaumont, Tex.—Chemicals for quick curing of moss.

Concrete Tower and Tanks.—Commr. of Fisheries, Dept. of Commerce, Washington, D. C.—Bids until Oct. 30 to construct concrete tower and tanks at Key West, Fla., biological station; for blank proposals, specifications, etc., address Commr. of Fisheries.

Crane (Revolving).—Riley-Knapp Construction Co., Pottsville, Pa.—Prices on 12 to 14-ft. gauge revolving crane (or whirley) with working capacity of 6-ton load at radius of 80 ft.; state details and condition.

Drills (Rotary).—See Well Drilling, etc.—Gumbo Oil & Gas Co., J. H. Winkey, Prest., Cooper, Tex.—Prices on rotary drills.

Dryer (Sand).—Riverside Sand Co., Charlotte, N. C.—Prices on new or second-hand sand dryer, such as used with asphalt plants; for installation Providence Forge, Va.

Electric-light, Heat and Power Systems.—City of Covington, Ky., Lew L. Applegate, City Recorder.—Bids until Nov. 30 for franchise to construct and operate powerhouses and systems to furnish light, heat and power by means of electricity.

Electric Wire and Cable, etc.—Panama Canal, Benedict Crowell, Gen. Purchasing Officer, Washington, D. C.—Bids until Oct. 27 for sheet copper, electric wire and cable, electric motor, motor generators, automatic starting compensator, electric fixtures and fittings, storage batteries, fire pump, anchors, chain, saws, ice cutter, glass holders, drinking glasses, aluminum pans, silverware, matting, napkins, paper, fire-brick, drain tile, silica sand, ferromanganese, sal soda, graphite, carbon bisulphide, calcium chloride, pitch, coal tar, cable grease, creosote oil, Japan oil, turpentine, paint remover, litharge, liquid filler, white lead, Japan drier, enamel, shellac, varnish, paints, lumber and creosoted ties; blanks, etc., relating to circular (No. 1174) obtainable at this office or offices Asst. Purchasing Agents, 24 State St., New York; Audubon Bldg., New Orleans; and Fort Mason, San Francisco; also from

United States Engr. offices throughout United States.

Engine (Traction).—C. G. Landon, 235 W. Grand Ave., Oklahoma City, Okla.—Prices on traction engines.

Engine.—Branford Lumber & Shingle Co., H. W. Taylor, Prest., Live Oak, Fla.—Good slide-valve 16x20 engine; for installation Branford, Fla.

Engine (Hoisting).—Argent Lumber Co., Hardeeville, S. C.—Prices on second-hand hoisting engine without boiler; with friction drum and double cylinders; cylinders to be about 8 in. diam.; state make and condition.

Engine and Boiler.—Riverside Sand Co., E. O. Jennings, Mgr., Charlotte, N. C.—Prices on 15 to 25 H. P. engine and boiler combined; for installation Providence Forge, Va.

Evaporators (Vegetable).—H. L. Harvey, 19 S. La Salle St., Chicago, Ill.—Data and prices on vegetable evaporating plant.

Feed Mill Equipment.—See Threshers, Hullers, etc.—P. Hamilton All.

Furniture.—St. Johns County Commr., Obe P. Goode, Clerk, St. Augustine, Fla.—Bids until Oct. 22 to furnish County Courthouse; plans and specifications obtainable from Fred A. Hendrich, Archt., for \$10.

Floors.—See Building Materials.—J. D. Simmons.

Generator Set.—Piedmont Electric Co., Electrical Bldg., Asheville, N. C.—Motor generator set; motor 440-volt, 60-cycle, 3-phase; generator 110-volt D. C.

Hammer (Steam).—Pelican Well Tool & Supply Co., Box 982, Shreveport, La.—Prices on 1500-lb. single frame steam hammer.

Heater (Feed Water).—Berkeley & Schmidt, Contrs. and Engrs., American National Bank Bldg., Richmond, Va.—250 or 300 H. P. open-type feed-water heater.

Heating and Plumbing.—Hawk & Parr, Archts., Oklahoma City.—Bids for heating and plumbing for Y. M. C. A. building now being erected on West Second St.; plans obtainable from architects on deposit of \$25; bids opened Oct. 10 at Lee-Huckins Hotel.

Heating Plant.—Jail Building Commission of Newberry County, J. M. Davis, Chrmn., Newberry, S. C.—Bids until Oct. 30 to furnish and install steam-heating system in county jail; plans and specifications furnished by J. E. Summer and J. C. Hemphill, Archts., National Loan and Exchange Bank Bldg., Greenwood, S. C., or L. W. Floyd, Secy. of Commission, Newberry.

Heating System.—Bureau Yards and Docks, Navy Dept., Washington, D. C.—Bids until Oct. 22 for furnishing and installing heating system in structural shop at navy-yard, Philadelphia; specification (No. 2570) and drawings on application to Bureau or to commandant of navy-yard named.

Hoist (Electric).—Roy C. Whayne Supply Co., 308 W. Main St., Louisville, Ky.—Yale & Towne, Sprague or other standard make 8 to 12-ton electric hoist, suitable for hanging on overhead trolley; good condition; 220 volts, 3-phase, 60 C., current.

Kiln (Cement).—"Tennessee," care Manufacturers Record, Baltimore, Md.—Second-hand cement kiln, 8 ft. diam., 80 to 110-ft. long; good condition; delivery Eastern Tennessee.

Lighting System.—E. D. Gardner, Baileytown, Tenn.—Lighting system for mill and dwelling.

Lumber.—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—33,000 ft. first and second hard maple, schedule 1517; 210,000 ft. green hewn domestic white oak, delivery Norfolk, schedule 1509; 209 white oak piles, 6 in. diam. at top, delivery Norfolk, schedule 1509; 15,000 ft. white pine B selects, delivery Charleston, S. C., schedule 1515; 275,000 ft. white pine C selects, delivery Norfolk, schedule 1515; 260,000 ft. Southern white cedar, delivery Brooklyn and Norfolk, schedule 1514; 635,000 ft. B and better cypress, delivery Norfolk and Washington, schedule 1514.

Liquid Hardener.—Treasury Dept., Office of Jas. A. Wetmore, Supvr. Archt., Washington, D. C.—Bids until Oct. 16 for treatment with liquid hardener of cement floors, etc., of U. S. Immigration Station, Baltimore; drawings and specifications from Supt. of Construction, Baltimore, or at above office at discretion of Supvr. Archt.

Machine Tools, etc.—See Woodworking Machinery, etc.—Geo. H. Dieringer.

Metal Stamping.—Joseph Moritz, Chief Experimental Laboratory, 121 Sherman Ave., New York. — Correspondence with shops equipped to manufacture small stamped metal lock with three moving parts, in quantities of 10,000; will furnish specifications and details.

Mining Machinery (Lead and Iron).—Washington County Lead & Iron Co., 107 N. 18th St., St. Louis, Mo.—Bids in 30 days on mining machinery.

Mining Machinery (Coal).—Rock Bottom Coal Co., W. G. Warwick, Mgr., Rockbottom, W. Va.—Prices on mining machinery.

Mining Machinery (Coal).—Grapevine Coal Co., W. S. Elgin, Mgr., Madisonville, Ky.—Data and prices on complete equipment for coal-mining plant; prefers electric operation; will consider steam.

Motors (Electric).—Fortier Electric Mfg. Co., Tulsa, Okla.—Prices on 1-5 and 3/4 H. P. electric motors, both A. C. and D. C.

Motors (Electric).—Rock Bottom Coal Co., W. G. Warwick, Mgr., Rockbottom, W. Va. Prices on electric motors.

Oil (Peanut) Machinery.—See Peanut Machinery.—J. P. Greenwood.

Paper (Insulating; Water-proof).—Fayetteville Ice & Mfg. Co., Drawer 428, Fayetteville, N. C.—Prices and samples on water-proof insulation paper.

Paving.—Paving Dist. No. 261, W. E. Harrington, Chrmn., Little Rock, Ark.—Bids to pave E. 6th St. and other streets included in Paving Dist. No. 261; includes 12,500 sq. yds. bitulithic or asphaltic concrete pavement; 27,400 sq. yds. Portland cement concrete; 18,400 cu. yds. excavation; 16,400 lin. ft. curb; 2800 sq. yds. concrete gutters; storm sewers, catch-basins, manholes, water service connections, etc.; plans and specifications on file with Lund & Hill, Engrs., 527 Southern Trust Bldg., Little Rock, and are obtainable for \$5 per set; bids opened Oct. 10 at office of Engrs.

Paving, etc.—Comms. Rockingham County, Wentworth, N. C., and city of Leakesville, N. C.—Bids until Oct. 15 to pave, otherwise improve and maintain road from Reidsville via Wentworth to Settle's bridge, 11 mi.; road from Spray to Leakesville and portion of Main St. in Leakesville, N. C., 1.1 mi.; asphalt, asphaltic concrete, tarvia macadam (penetration method), tarvia macadam (mixed method), Warrenite paving; specifications on file with County Clerk at Wentworth; contractor to visit site of work and examine specifications, which will not be mailed; J. N. Ambler, Const. Engr., Winston-Salem, N. C.; R. E. Wall, Chrmn. County Comms., Spray, N. C.; E. C. Richardson, Mayor, Leakesville.

Paving, etc.—City of Joplin, Mo., J. B. Hodgdon, Commr. of Streets and Public Improvements.—Bids to grade and pave Sergeant Ave. from 1st to 3d St., cost \$3144, and from 3d to 4th St., cost \$1022; bituminous macadam surface, penetration method, on 7-in. macadam base; bids opened Oct. 9.

Paving, etc.—D. C. Morris, Recorder, Morristown, Tenn.—Bids until Oct. 26 to improve streets, including grading, curbing and guttering, 4 1/2-ft. sidewalks and water-bound street macadamizing to width of 16 ft.; 2000 cu. yds. excavation; 7000 sq. ft. water-bound macadam; 7800 lin. ft. curb and gutter; 34,530 sq. ft. sidewalks; 2230 sq. ft. concrete crossings; 40 lin. ft. 24-in. pipe; 30 lin. ft. 12-in. pipe; 200 lin. ft. 10-in. pipe; 14 catch-basins; 7 manholes; separate bids on curbing, guttering and sidewalk; storm sewer, manholes and catch-basins; grading and excavation; macadamizing; also bids on whole work.

Peanut Machinery.—J. P. Greenwood, Archt.-Engr., Dallas, Tex.—Names and addresses of Manufacturers of peanut-oil machinery; equipment to pick peanuts for confectionery.

Piping (Brass and Steel).—See Tubing (Copper), etc.—Bureau Supplies and Accounts.

Pipe.—See Well Drilling, etc.—Gumbo Oil & Gas Co., J. H. Winkley, Prest., Cooper, Tex.—Prices on 8 1/2 and 6 1/2-in. casing.

Planing Mill Machinery.—See Woodworking Machinery, etc.—Geo. H. Dieringer.

Press (Baling).—John W. Arrington, Greenville, S. C.—Second-hand knuckle joint baling press.

Punches and Shears.—Henry Potts & Co., 650 Real Estate Trust Bldg., Philadelphia, Pa.—Five 60-in. gap punches, 1-in. hole through 1-in. plate; 36-in. gap punches, 3/4-in. hole through 3/4-in. plate; three 16-in. gap punches, 1/2-in. hole through 3/4-in.

plate; horizontal punch, 3/4-in. hole through 3/4-in. plate; two 48-in. gap shears with capacity for 1 1/2-in. plates.

Rail.—Witcher Creek Coal Co., Box 979, Charleston, W. Va.—Prices on No. 12 steel (mine) rail.

Railway Frogs.—Chas. A. McLean, 412 Citizens' Bank Bldg., Norfolk, Va.—Six 35 or 40-lb. frogs for standard gauge, not less than 35 ft. lead.

Rendering Machinery (Dead Animal).—P. Hamilton All, All's Ginnery, Allendale, S. C.—Prices on complete second-hand equipment, exclusive of boiler and engine, for reduction of dead animals into tankage.

Road Roller, etc.—Municipal Construction Co., Miami, Fla.—Prices on 10-ton road roller and street sprinkler outfit.

Road Construction.—Hillsborough County Comms., W. P. Culbreath, Clerk, Tampa, Fla.—Bids until Oct. 23 to pave with shell Bayshore Rd. from end of present shell road to Little Manatee River; plans and specifications on file with County Comms.

Safe.—See Bank Fixtures.—J. B. Cash.

Saw.—Flint River Lumber Co., Bainbridge, Ga.—Small circular resaw; prefer used machine, in good condition.

Shears.—See Punches and Shears.—Henry Potts & Co.

Sprinkling Equipment (Street).—See Road Roller, etc.—Municipal Construction Co.

Stack (Steel).—Berkeley & Schmidt, Contrs. and Engrs., American National Bank Bldg., Richmond, Va.—42x80 steel stack, complete with guy wires and turn-buckles.

Trucks (Auto).—C. G. Landon, 235 1/2 W. Grand Ave., Oklahoma City, Okla.—Prices on auto trucks.

Threshers, Hullers, etc.—P. Hamilton All, All's Ginnery, Allendale, S. C.—Prices on machinery to grade and thresh velvet beans and hull rice.

Tubing (Copper), etc.—Bureau Supplies and Accounts, Navy Department, Washington, D. C.—Bids until Oct. 16 for delivering brass and steel pipe and copper tubing at naval station, New Orleans; apply for proposals to supply officer, naval station, New Orleans, or to Bureau.

Piping.—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—5000 lbs. 1 and 2-in. I. P. S. brass pipe, delivery New Orleans, schedule 1519; 24,500 lbs. galvanized steel pipe, delivery New Orleans, schedule

1520; 4200 lbs. copper tubing, delivery New Orleans, schedule 1519.

Pump (Gasoline).—Roy Coal Co., Lee Kilgore, Prest., Coeburn, Va.—Prices on small gasoline pump; installation Norton, Va.

Rails.—Roy Coal Co., Lee Kilgore, Prest., Coeburn, Va.—Prices on steel rails; installation Norton, Va.

Shear (Power).—Wilmington Iron Works, Wilmington, N. C.—Rod and bar power shear, cutting rods up to 1 1/2 in. diam.; Buffalo or New Doty Mfg. Co.'s brand preferable.

Safe.—See Bank Fixtures.—Farmers & Merchants' Bank.

Screw Machinery, etc.—Payne Valve Corp., Nininger Bldg (also P. O. Box 252), Roanoke, Va.—Will open bids Oct. 20 on automatic screw and turret-forming machinery for manufacture of small valves for automobile tires.

Stump-reduction Plant.—H. L. Harvey, 19 S. La Salle St., Chicago, Ill.—Data and prices on stump-reduction plant.

Vault.—West End Investment Co., Dr. W. C. Gwin, Prest., Birmingham, Ala.—Prices on safe, vault and other bank fixtures.

Vault.—See Bank Fixtures.—J. B. Cash.

Wagons (Dumping).—C. G. Landon, 235 1/2 W. Grand Ave., Oklahoma City, Okla.—Prices on dump wagons.

Water-works.—City of Lockney, Tex., J. R. Meriwether, Mayor.—Bids until Oct. 16 to construct water-works to consist of 100 ft. 8-in. cast-iron pipe; 2 1/2 tons specials; 14 hydrants; one 8-in. and four 6-in. valves with cast-iron valve box; 75,000-gal. tank and tower, 100 ft. to balcony; pump-house and pumping equipment; plans and specifications on file with Henry Exall Elrod, Engr., Interurban Bldg., Dallas, upon deposit of \$5.

Well Drilling, etc.—Gumbo Oil & Gas Co., J. H. Winkley, Prest., Cooper, Tex.—Ready for bids on drilling for oil and gas; may buy rotary drilling equipment; wants prices on 8 1/2 and 6 1/2-in. casing.

Wire Rope.—Witcher Creek Coal Co., Box 979, Charleston, W. Va.—Prices on 800 ft. No. 16 and No. 56 steel wire rope.

Woodworking Machinery, etc.—George H. Dieringer, Archt., Wheeling, W. Va.—Catalogues, data and prices on cement-working; woodworking machinery; tools and appliances for electrical, plumbing and steam-fitting shops; small planing mill.

RAILROAD CONSTRUCTION

RAILWAYS

Ga., Clermont.—Chestatee Railway Co., capital stock \$150,000, has applied for charter to build its proposed line from Clermont, on the Gainesville & Northwestern Railway, to Chestatee, 9 1/2 miles to reach mines of the Chestatee Pyrites & Chemical Corp. Incorporators: N. P. Pratt, Palmer Pratt, R. H. Dooner, W. D. Ellis, Jr., Mell Wilkenson, Lee Ashcraft, Van W. Wilkinson, Geo. McCarty, Jr., and J. M. Parrott, all of Atlanta.

Ky., Shelbyville.—Plans have been agreed upon between the Shelbyville & Frankfort Realty Co. and Phillips & Beach, construction engineers of Philadelphia, for the construction of the proposed interurban railway from Shelbyville to Frankfort, Ky., 19 1/2 mi. E. H. Taylor of Frankfort is Prest.; J. W. Gudgel, Secy., and Rowland Cox, Ch. Engr., both of Shelbyville. Under the agreement construction must begin by March 1 next.

Tenn., Middleton.—About 8 1/2 miles of the extension of the Gulf, Mobile & Northern Railway from Middleton to Jackson, Tenn., is reported practically finished. R. P. Parker, Jackson, is Ch. Engr.

Tex., Beaumont.—Kansas City Southern R. R. Co. has been authorized to build a connection between Griffin and Port Neches, 8 mi. J. M. Weir, Kansas City, Mo., is Ch. Engr.

Tex., Dallas.—Dallas Southwestern Traction Co. is building electric railway from Dallas to Eagle Ford, 5 mi., and thence to Irving, 5 mi. more. Other proposed construction from Eagle Ford to Cleburne, Tex., 47 mi. Creek Construction Co. of Sapulpa, Okla., is contractor. E. P. Turner is Vice-Prest. and Gen. Mgr., and Jno. T. Witt, 304 Gaston Bldg., is Chief Engr.; both of Dallas. Includes two steel bridges of 200 ft. and 125 ft., respectively.

Va., Newport News.—Construction of the proposed Washington & Newport News Short Line Rwy. has been deferred until after the war because of prohibitive cost and scarcity of labor and materials. Frank S. Gaunon, 55 Liberty St., New York, is Prest.; Channing M. Ward, Virginia Passenger & Power Bldg., Richmond, Va., is Ch. Engr. Richard Armstrong, W. B. Livezey and A. L. Powell are also directors, and O. D. Batchelor is attorney.

STREET RAILWAYS

Ala., Montgomery.—Montgomery Light & Traction Co. will build an extension of its street railway in connection with service to Camp Sheridan. Richard Tillis is Prest.

D. C., Washington.—The Capital Traction Co. has been granted an extension of time until January 1 to build its proposed extension on 17th and 19 Sts., south of Pennsylvania Ave. D. S. Carl is V-P.

Fla., Tampa.—The Tampa Electric Co. denies recent press report that it would build an extension of its street railway, saying it is not contemplated to extend or enlarge the system in the near future. G. J. Baldwin is Prest. and C. F. W. Wetterer, Mgr.

Ky., Whitesburg.—W. A. Daniels is reported contemplating construction of a street railway in Whitesburg with extensions to West Whitesburg, Caudill and Sand Lick.

INDUSTRIAL NEWS OF INTEREST

Now in the Naval Aeronautic Corps.

Charles C. Cheyney, manager of the Chicago office and store of the Buffalo Forge Co., has a commission on the Naval Aeronautic Corps and is beach engineer at Pensacola, Fla., in charge of aeroplane engines.

FINANCIAL NEWS

The MANUFACTURERS RECORD invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

FINANCIAL CORPORATIONS

Ala., Birmingham.—West End Investment Co. Inceptd.; capital \$50,000. Organizers: Dr. W. C. Gwin, Prest.; Dr. Gaston Torrance, Dr. C. M. Nice, Dr. M. C. Schooler and Dr. A. E. Wilkes. Business is to begin Nov. 1.

Ala., McCullough.—Farmers Exchange Bank, chartered; capital \$10,000. Organizers: E. D. Espy, Allen Mack, W. J. Donnelly, W. H. McCullough and others. Business is expected to begin in about 30 days.

Ark., Mineral Springs.—First National Bank of Mineral Springs has made application for charter; capital \$25,000.

Ga., Atlanta.—Empire Trust Co. is chartered; capital \$100,000 to \$1,000,000. H. M. Atkinson, Chrmn. of Board; W. B. Stovall, Prest.; John C. Lusk, V-P.; J. R. Neal, Treas.

Ga., Chamblee.—Bank of Chamblee, capital \$25,000, chartered. Petitioners: S. H. Allen and E. E. Harrison, Cumming, and B. T. Sheffield and others of Chamblee.

Ga., Ellaville.—Council Bank chartered, capital \$32,000. M. B. Council, Prest.; J. C. Ratney, Cashier. Business is to begin Jan. 1.

Ga., West Point.—The Citizens Savings Bank which has made application to change its name to the Citizens Bank proposes to increase capital from \$25,000 to \$50,000. J. A. Avery is Prest.; R. C. Freeman, V-P., and R. B. Dixon, V-P. and Cashier.

Ky., Benham.—Bank of Lynch to be located near Benham is organized with \$25,000 capital paid in. Geo. A. Smith, Benham is Cashier.

Ky., Paducah.—City National Bank of Paducah has absorbed the Paducah Banking Co.

La., Coushatta.—People's Bank of Coushatta, capital \$15,000, is organized with Joseph Leindecker, Prest., and W. P. Carter, V-P.

Mo., Kansas City.—Interstate Securities Co. of Kansas City, capital \$50,000, Inceptd. by B. C. Howard, Ralph L. Adam and M. E. Dixon.

N. C., Asheville.—General Securities Corporation Inceptd., capital \$50,000. Incorporators: Fred. L. Sales, W. C. Pennell and George Pennell. Business will begin in near future.

N. C., Aurora.—Richland Farmers' Bank is chartered; capital \$100,000. Incorporators: Stephen C. Bragaw, A. D. McLean and A. M. Dumay of Washington and others.

N. C., Kenly.—Farmers' Bank of Kenly is organized with H. F. Edgerton, Prest.; L. Z. Woodard, V-P., and E. O. McGowan, Cashier.

N. C., Badin.—Bank of Badin is chartered; capital \$50,000. Organizers: J. E. S. Thorpe, C. G. Duffington, T. L. McGowan and others. Business is to begin about Nov. 1.

N. C., South Mills.—Farmers and Merchants Bank Inceptd., capital \$10,000, will begin business about Nov. 15. W. I. Halstead, Prest.; Dr. C. G. Ferchee, V-P.; Alton Jordan, Cash.

Okla., Ardmore.—The First National Bank will on Nov. 1 take over the Ardmore National Bank. The First National will have \$200,000 capital and \$100,000 surplus. D. Lacy, Prest.; Perry Maxwell, G. W. Stewart and Ed Sandlin, V-Ps.; C. L. Anderson, Cash.; O. H. Wolverton, Asst. Cash.

Capital and Surplus
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WALDO NEWCOMER, President.
SUMMERFIELD BALDWIN, Vice-Pres.
R. VINTON LANSDALE, Cashier.
C. G. MORGAN, Asst. Cashier.
Accounts of Mercantile Firms, Corporations, Banks, Bankers and Individuals Invited.

Maryland Trust Company

BALTIMORE

Capital \$1,000,000

TRANSACTS A GENERAL TRUST AND
BANKING BUSINESS

Correspondence and interviews
Invited

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OF COLUMBIA

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Surplus and Undivided Profits \$250,000.00
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Okl., Oklahoma City.—Cottage Investment Co., capital \$3000, inceptd. by High L. Harrell, Carl H. Crossier and O. W. Connally.

S. C., Chesnee.—Citizens' Bank of Chesnee chartered; capital \$15,000. Incorporators: J. A. Law, S. T. Reid and Geo. W. Wall, Spartanburg, S. C.; W. H. Martin, F. H. Weaver, J. B. Cash and E. F. Wall, Chesnee. Business is to begin Oct. 15.

S. C., Conestee.—Bank of Conestee is chartered; capital \$10,000; Joel D. Charles, Pres.; Preston Charles, V.-P.; L. M. Clyde, Cash.

S. C., Mount Pleasant.—Bank of Mount Pleasant has been granted a commission; capital \$25,000. Petitioners: Edward Tiencen, V. G. Lewis and Lee Royall.

Tenn., Greeneville.—Merchants' Mutual Fire Insurance Co. inceptd. by Andrew J. Crosby, A. C. Smellen, S. A. Toby, Lee Allen and W. L. Fuller.

Tex., Bridgeport.—Bridgeport State Bank chartered; capital \$25,000. Guinn Williams, Pres.; Wm. Simpson, V.-P.; L. D. Kirkpatrick, Cash. Business has begun.

Tex., Dallas.—Dallas County State Bank, capital \$100,000, is organized to succeed the private bank of Stiles, Thorton & Lund. Business is to begin early in November at 704 Main St. R. L. Thornton, Pres.; M. C. Lund, Cashier; William M. Holland and A. C. Stiles, V.-Ps.



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Tex., El Paso.—Empire Investment Co., Inc., capital \$3000. Incorporators: R. E. Sherman, W. F. Kirby, J. T. McLean and others.

Tex., Harrisburg.—American State Bank of Harrisburg, succeeding the American Exchange Bank, is organized with \$10,000 capital. S. D. Simpson, Pres.; Dr. I. C. Cognor, V.-P.; Gertrude L. Masters, Cash.

Tex., McGregor.—First State Bank of McGregor is chartered; capital \$50,000. J. H. Lockwood, Pres.; L. E. Bain, Cash.

Tex., New Boston.—New Boston Exchange Bank, capital \$30,000, has begun business. W. W. White, Pres.; J. W. Haralson, V.-P., and O. H. Proctor, Cashier.

Va., Shenandoah.—National Bank of Shenandoah has made application for charter; capital \$25,000. The People's Bank at Harrisonburg, Va., is said to be interested.

NEW SECURITIES

Ala., Bay Minette.—(Road; Bridge).—At private sale Oct. 15, Baldwin County will sell \$75,000 of 5 per cent. 30-year \$1000 denomination bonds. J. M. Volts is Judge of Probate.

Ala., Geneva.—(Road).—Election is to be held in Geneva County to vote on \$100,000 of bonds. Address County Commrs.

Ark., Newport.—(Road).—Bids will be received until 2 P. M. Oct. 12 for from \$250,000 to \$350,000 of 5-20 or 5-25-year bonds Road Improvement Dist. No. 2, Jackson County. W. N. Nance is Secy. Bd. of Commrs. of Dist. Further particulars will be found in the Proposals Department.

Ark., Texarkana.—(Bridge).—Special dispatch to the Manufacturers Record says that \$260,000 of Red River bridge bonds have been purchased at par and \$360 premium by the Mississippi Valley Trust Co., St. Louis.

Fla., Arcadia.—(Warrants).—\$20,000 of 6 per cent. 1-5-year time warrants of Road Dist. No. 4, DeSoto County, are voted. A. L. Durrance is County Clerk.

Fla., Bartow.—(Road, Bridge).—\$150,000 of bonds Special Road and Bridge Dist. No. 2, Polk County, have been purchased at \$142,600 by J. C. Mayer & Co., Cincinnati.

Fla., Miami.—(Road, Bridge).—Bids will be received until 10 A. M. Oct. 24 for \$140,000 of bonds, special road and bridge Dist. No. 2, Dade County; Ben Shepard is Clk. Board County Commrs. Further particulars will be found in the Proposals Department.

Fla., Perry.—(Street).—\$90,000 of bonds are voted. Address The Mayor.

Fla., Ft. Pierce.—(Road, Bridge).—Bids will be received until 2 P. M. Nov. 6 for \$80,000 of 6 per cent. bonds Special Road and Bridge Dist. No. 1, St. Lucie County; maturity 1922 to 1944, inclusive. P. C. Eldred is Clk. Circuit Court, St. Lucie County. Further particulars will be found in the Proposals Department.

Ga., Irwinton.—(School).—Election is soon to be held in Gordon School Dist., Wilkinson County, to vote on \$25,000 of 5 per cent. bonds. Address School Board.

Ky., Lawrenceburg.—(Filtration).—Election is to be held in November to vote on \$15,000 of bonds. Address The Mayor.

Ky., Flemingsburg.—(School).—\$10,000 of Flemingsburg School Dist., Fleming County bonds, recently voted, are reported sold. Address School Board.

La., Baton Rouge.—(Road).—Bids will be received until noon Nov. 13 for \$50,000 of 5 per cent. 27-year bonds, Series "D," Road Dist. No. 2, East Baton Rouge Parish. Bonds are dated Oct. 1, 1917. Denomination \$1000. Address Jos. Gebelin, Pres. Police Jury. F. A. Woods is Secy. Further particulars will be found in the Proposals Department.

La., De Ridder.—(Refunding).—\$155,000 of the \$175,000 of 5 per cent. \$500 denomination bonds dated Oct. 1, 1917 and maturing serially 1918 to 1947, have been purchased at par by Cummings & Prudden, Toledo, Ohio.

La., Ruston.—(School).—Lincoln Parish has voted bonds. Address Police Jury.

Md., Upper Marlboro.—(School).—Bids will be received until noon Oct. 23 by E. S. Burroughs, Secy. Board of Education, Prince George County, for \$35,000 of 5 per cent. 30-year bonds.

Miss., Clarksdale.—(Railroad).—Bids will be received until 7:30 P. M. Nov. 6 for \$100,000 of railroad aid bonds. R. E. Stratton, Jr., is City Clerk.

Miss., Jackson.—(State Bonds).—Bill has been introduced in the Legislature providing for the issuing of \$3,000,000 of bonds to meet deficit in Mississippi State's funds. Theo. G. Bilbo is Governor.

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Miss. Macon—(School).—Bids will be received until Nov. 6 for \$3000 of 6 per cent. \$100 denomination Cliftonville Consolidated School Dist., Noddy County, bonds, dated Oct. 3, 1917; maturity 1918 to 1929, inclusive. John A. Tyson is Clerk of the Board.

Miss. Meridian—(Ice Plant).—Election is to be held Nov. 2 to vote on \$150,000 of not exceeding 5 per cent. bonds; dated Oct. 1, 1917, and maturing Oct. 1, 1918 to 1946, inclusive. J. M. Dabney is Mayor.

Miss. Tunica—(Town Bonds).—Bids will be received until 7 P. M. Oct. 16 for \$8000 of 6 per cent. \$1000 denomination bonds, maturing \$1000 annually. B. L. Russell, C. V. Moore and W. H. Houston, Committee for sale of bonds.

Miss. Waynesboro—(Light).—Notice is given by the Bd. of Aldermen of intention to issue \$6000 of electric-light-plant bonds. Address The Mayor.

Mo. Doniphan—(Road).—\$200,000 Ripley County bonds defeated.

Mo. Houston—(School).—Cabool School Dist., Texas County, bonds are voted. Address School Board.

Mo. Kansas City—(Road, Sewer, etc.).—The remaining \$150,000 of bonds of the \$500,000 issue offered Sept. 29 will be placed in the hands of Comptroller Eugene H. Blake for private sale. The other \$500,000 were purchased by the city sinking fund.

Mo. Miami—(Water, Storm, Sewer).—Election is to be held Oct. 17 to vote on \$200,000 of 6 per cent. 25-year bonds. Address The Mayor.

N. C. Charlotte—(School).—Bids will be received until noon Nov. 5 for not exceeding \$12,000 of 6 per cent. 20-year bonds Special School Dist. No. 5, White Paw Creek Township, Mecklenburg County. J. Arthur Henderson is Chmn. County Board of Education.

N. C. Columbus—(Road).—Bids will be received until noon Nov. 4 for \$9000 of Tryon Township and \$6000 Saluda Township, Polk County, bonds. A. L. Pitman is Register of Deeds and Clerk Board County Comms.

N. C. Durham—(Water, Funding, Sewer).—Bids will be received until 2 P. M. Oct. 16 for the following 5 per cent. bonds: \$250,000 of water, dated Jan. 1, 1917 and maturing 1920 to 1945, inclusive; \$80,000 of funding, dated Aug. 1, 1917 and maturing 1918 to 1927, inclusive; \$50,000 sewerage, dated Aug. 1, 1917 and maturing 1920 to 1938, inclusive. B. S. Skinner is Mayor, and Geo. W. Woodward, Clk. Board of Aldermen.

N. C. Edenton—(School).—Board of Trustees of Edenton Graded School Dist. proposes to issue \$6000 of 5 per cent. bonds, dated June 1, 1917, and maturing 1941 to 1946, inclusive.

N. C. Fairmount—(Public Improvement).—\$20,000 of 30-year bonds are reported sold. E. W. Floyd is Town Clk.

N. C. Greensboro—(School).—Election is to be held Nov. 10 to vote on \$40,000 of Fentress Township, Guilford County, bonds. Address School Board.

N. C. Hamlet—(Street).—Bids will be received until 5:30 P. M. November 1 for \$30,000 of 5½ or 6 per cent. 10-year bonds, dated Jan. 1, 1918. J. C. Leigh is Mayor and G. B. Lewis, City Clk. Further particulars will be found in the Proposals Department.

N. C. High Point—(Street, Funding, Assessment).—A letter to the Manufacturers Record says that of the \$320,000 of bonds offered Sept. 25, the \$39,000 of street improvement bonds were purchased at \$11.70 premium by the Provident Savings Bank & Trust Co., Cincinnati. Later \$50,000 more bonds were purchased by Harris, Forbes & Co., New York, at par and interest. T. J. Murphy is City Manager. (Recently noted.)

N. C. Jackson—(School).—Bids will be received until Nov. 6 by P. J. Long, Secy., County Board of Education, for \$5000 of 6 per cent. bonds Woodland School Dist., Northampton County.

N. C. Rockingham—(School).—Bids will be received until noon Nov. 7 for \$12,500 of not exceeding 6 per cent. bonds School Dist. No. 4, Mineral Springs Township, Richmond County. Address County Bd. of Education. L. J. Bell is County Supt. of Schools. Further particulars will be found in the Proposals Department.

N. C. Scotland Neck—(Water, Sewer).—\$80,000 of bonds are reported sold. Address The Mayor.

N. C. Wilson—(School).—\$5000 of not exceeding 6 per cent. 20-year bonds, Wilson County School Dist. No. 5 are voted. Chas. L. Coon is Supt. of Schools.

N. C. Wilson—(School).—\$35,000 of 5½ per cent. Wilson graded school bonds have been purchased at \$187 premium by Sidney Spitzer & Co., Toledo, Ohio.

Okla., Alluwe—(School).—\$15,000 of bonds are voted. Address School Board.

Okla., Bristow—(Funding).—Steps are reported being taken to issue \$80,000 of bonds to fund warrant indebtedness. H. W. Corey is City Treas.

Okla., Hartshorne—(Filtration Plant, City Hall).—Election is soon to be held to vote on \$26,000 of bonds. Address The Mayor.

Okla., Hobart—(Waterworks).—Election will probably soon be held to vote on bonds for water-works improvement. Address The Mayor.

Okla., Hugo—(Road).—Election is to be held in Wilson Township, Choctaw County, to vote on \$50,000 of bonds. Address County Comms.

Okla., Indianola—(Water-works).—\$15,000 of 6 per cent. 5-20-year bonds have been purchased at par by Geo. W. and J. E. Piersol, Oklahoma City, Okla.

Okla., Marshall—(Water-works).—Election will probably be called to vote on \$5000 of bonds. Address The Mayor.

Okla., Miami—(Road, Jail).—Election is to be held in Ottawa County November 20 to vote on \$350,000 of road and \$50,000 of jail bonds. Address County Comms.

Okla., Oklahoma City—(Bonds approved by Atty.-Gen.).—\$800 Love County, School Dist. No. 11; \$30,000 garbage plant, Okmulgee; \$13,500 Goldsby Township, McClain County, road.

Okla., Oklahoma City—(School).—Election is soon to be held, it is reported, to vote on school and fire-department bonds. Address The Mayor.

Okla., Pauls Valley—(Courthouse and Jail).—Petition has been circulated providing for an election to vote on \$150,000 of bonds. Address The Mayor.

Okla., Pawhuska—(Gas).—\$75,000 of 6 per cent. 25-year serial bonds will be voted on in the near future. A conditional sale has been made, at par and \$550 bonus, to A. J. McMahan, Oklahoma City. The bonds will also be submitted to the Atty.-Gen.

Okla., Redrock—(Water-works).—Water-works bonds have been voted and sold. Address The Mayor.

Okla., Sand Springs—(Sewer).—Election will soon be held to vote on \$40,000 of bonds. Address The Mayor.

Okla., Tulsa—(Road).—Election is to be held in Tulsa County to vote on \$1,500,000 of road-improvement bonds. Address County Comms.

Okla., Wynne Wood—(Sewers).—\$16,000 of 6 per cent. 25-year \$500 or \$1000 denomination bonds, dated Oct. 1917, are voted. E. L. Keys is Mayor, and J. H. Boozer is City Clk.

S. C. Darlington—(Street).—\$50,000 of 5½ per cent. 1-25-year bonds have been sold at par to a New York concern through the Bank of Darlington.

Tenn., Sneedville—(Road).—The \$100,000 of not exceeding 5 per cent. 5-14-year Hancock County bonds have not yet been sold. Denomination \$500 to \$10,000 to suit purchaser. H. B. Jarnagin is Chmn. Board of County Comms.

Tex., Anderson—(School).—Question of holding an election to vote on \$75,000 of bonds is under consideration. George W. Curtis is Secy. School Board.

Tex., Austin—(Bonds approved by Atty.-Gen.).—\$4700 of 5 per cent. 40-year Tarrant County Common School Dist. No. 29; \$1500 of 5 per cent. 40-year bonds McLennan County, No. 3-B; \$1500 of 5 per cent. 5-20-year Jones County No. 46; \$750 of 5 per cent. 10-20-year Camp County No. 8; \$1000 of 5 per cent. Dist. No. 62 and \$1200 Dist. No. 66 of 10-20-year 5 per cents, Rusk County; \$1000 Hopkins County Common School Dist. No. 51; \$1500 Hopkins County Common School Dist. No. 28; \$1500 of Lubbock and Hale Line School Dist.; \$3000 of Gonzales County Common School Dist. No. 20; \$75,000 Dist. No. 3 and \$30,000 Dist. No. 2 of 5 per cent. 20-40-year roads, Cass County; \$2900 of 5 per cent. 40-year Mt. Vernon water-works; \$1500 of 5 per cent. 10-20-year Brown County Common School Dist. No. 17; \$1400 Brown County Common School Dist. No. 13; \$1900 Floyd County Common School Dist. No. 23; \$1000 Angelina County Common School Dist. No. 27.

Tex., Austin—(Sewer, Street, School, etc.).—\$365,000 of municipal improvement bonds were defeated Oct. 2. A. P. Wooldridge is Mayor.

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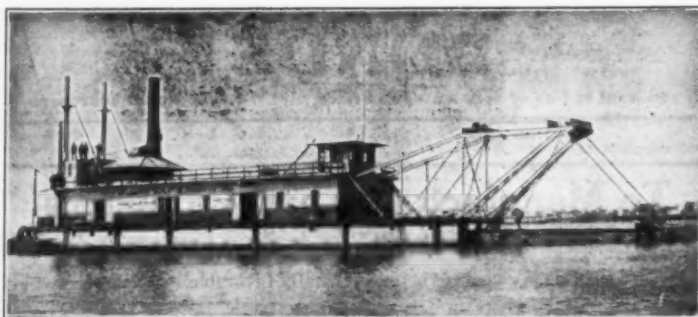
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Tex., Colorado—(Road).—Election is to be held about Nov. 1 to vote on \$70,000 of Mitchell County bonds. J. H. Bullock is County Judge.

Tex., Daingerfield—(Road).—\$35,000 of 5 per cent. 40-year bonds Omaha Precinct, Morris County, were recently voted. Address Comms.' Court, Daingerfield.

Tex., Dallas—(School).—The \$500,000 of 4 per cent. bonds soon to be offered for sale are dated Nov. 1, 1917, and mature 1957. Denomination \$1000. Address Wm. Doran, Commissioner of Finance, City Hall.

Tex., El Paso—(Street, School Water).—Election is to be held Oct. 31 to vote on \$100,000 of 4½ per cent. street, \$100,000 of 5 per cent. school and \$100,000 of 5 per cent. water-works improvement bonds. Address The Mayor.

Tex., Granbury—(School).—\$25,000 of 5 per cent. 10-40-year \$500 denomination bonds were voted Sept. 8. Bonds not yet offered. Address D. S. Casidy, Abilene, Tex. A. T. Larned is Secy. School Board at Granbury.

Tex., Lockney—(Water-works).—Bids will be opened Oct. 15 for \$25,000 of 5 per cent. 20-40-year \$1000 denomination bonds, recently voted. J. R. Meriwether is Mayor.

Tex., New Braunfels—(Fire Station).—The \$10,000 of bonds recently voted are 40-year 5 per cents. Denomination \$100. Bonds not for sale as yet. Chas. Alves is Mayor.

Tex., Orange—(School).—Steps are being taken to issue \$75,000 of bonds. George W. Curtis is Secy. City School Board.

Tex., Paris—(Street).—The \$20,000 of bonds voted on Oct. 9 are 10-30-year 5 per cents. Address The Mayor.

Tex., Port Lavaca—(Road).—Election is to be held Oct. 20 to vote on \$75,000 of 5 per cent. 30-year bonds Road Dist. No. 2, Calhoun County. F. M. Dudgeon is County Judge.

Va., New Kent—(Highway).—Bonds for improvement of automobile highway are to be issued by New Kent County. Address County Comms.

Va., Bristol — (Street).—\$20,000 of 5 per cent. 20-year \$1000 denomination bonds have been purchased at par, less \$400 for expenses, by Baker, Watts & Co., Baltimore.

W. Va., Williamson — (Road).—Arrangements are said to be made for the sale of \$1,000,000 of Mingo County bonds. Address County Comms.

FINANCIAL NOTES

The National Bank of Commerce in New York announces that extra compensation will be paid to its employees "in recognition of the prevailing high cost of living and loyal services rendered." The increase amounts to 20 per cent. of their annual salary for employees receiving less than \$2000 a year, and to 16 per cent. of their annual salary for employees receiving up to \$4000 a year. The first payment will be made November 5 and the entire extra compensation will be paid in six equal installments. Approximately 600 employees will participate.

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INDUSTRIAL NEWS OF INTEREST

Change of Address.

The Brett Engineering & Contracting Co. has changed its address from Wilson, N. C., to 327-333 Monticello Arcade, Norfolk, Va.

Has Occupied New Location.

The American Pulverizer Co. announces that it has moved its general and sales offices, factory and new experimental laboratory, and they are now located at 18th and Austin Sts., St. Louis, Mo.

Sales Agent Appointed.

The Asbestos Protected Metal Co. of Pittsburgh announces the appointment of Ole K. Olsen, 822 Perdido St., New Orleans, as sales agent for the State of Louisiana and the Southern portion of Mississippi.

Two Vice-Presidents Elected.

The Federal Export Corporation announces the election of Samuel A. Benner and Dwight S. Guthrie as vice-presidents to be managers of its iron and steel department, and it further states that Mr. Benner's long and varied experience both at home and abroad with the Carnegie Steel Co., and Mr. Guthrie's similar experience with the Republic Iron & Steel Co., will enable the Corporation to render valuable service to its customers.

Has Opened a New Office.

Edward A. Moss announces that he has severed his connection with the J. E. Moss Iron Works of Wheeling, where he was vice-president and manager of sales, and had been with the company since its formation. He acquired an enviable reputation in the structural steel and ornamental iron business, and he has recently established an engineering and sales office at 3831 Euclid Ave., Cleveland, Ohio.

Sale of Valuable Factory Property.

Announcement is made that on October 17 and 18 there will be a public sale of the property included in the Florence division of the Central Oil & Gas Stove Co., at Florence (Northampton) Mass., the company having decided to concentrate all its business at the plant of the Gardner division, which is being enlarged for that purpose. The Florence plant to be sold includes four lots of real estate for manufacturing, which have superior locations, and 1378 lots of machinery, mechanical equipment, electric motors and much-related personal property. There is a large quantity of kiln-dried and seasoned hardwood lumber and very extensive office furnishings. The auction will take place on the premises, the sale, which is to be made to the highest bona fide bidder is under the direction of Solon Wilder and Harvey N. Brooks for the trustees of the Wilder Associates, owners of the property. An illustrated and descriptive catalogue, including a plat of the real estate, may be obtained from the auctioneers, J. E. Conant & Co. of Lowell, Mass.

Factory Enlarged to Meet Increasing Demands.

The Phillips & Buttrick Mfg. Co., Nashville, Tenn., having sold to C. C. Fuller, formerly one of its department managers, its mantle, tile and sheet-metal construction business, is now readjusting its tinware factory so as to double the space therein and increase facilities accordingly. The demand for syrup buckets and the company's "Blue Ribbon" tinware is exceeding all expectations, and operation at night has become necessary to keep pace with sales. Much of the increased factory space will be devoted to the recently added "home canners and food conservation branch," and inability to supply all the cans needed this year has made clear the need to prepare for next year's business on a much larger scale. At the main plant, where stoves and ranges are made, equipment was provided for more molders than the company has yet been able to secure, but as a range manufacturer the company finds itself compelled by existing conditions to enter all fields of business in the United States, and also for export. Its products have been approved by the Government inspectors, and they are being regularly bought for the Government service.

TRADE LITERATURE

All About "Cincinnati" Mixers.

The Ideal Concrete Machinery Co., Cincinnati, Ohio, has issued a new catalog, No. 33, relating to the Cincinnati Mixers for general contracting purposes. It includes the company's complete line which it is offering to the trade for 1918. It is not a

large catalog, but is very complete, and says that these mixers offer equipments of superior character, each so well adapted to handling some particular kind of work, that prospective buyers will find among them the very thing best suited to handle their contracts. The workings of these mixers is shown by a series of excellent illustrations, while still other pictures display the general appearance of the different equipments.

Sullivan Air Compressors.

Two recent bulletins of the Sullivan Machinery Co., manufacturers of mining and quarrying machinery, People's Gas Building, Chicago, are No. 75-C, regarding Sullivan single-compound power-driven air compressors, and No. 75-F, about Sullivan tandem compound Corliss air compressors, Class "WC." Both are fully and handsomely illustrated and the descriptive matter abundant in information. The pictures show different parts of the machines as well as the complete products of the works. There are also presented tables of dimensions, weights and specifications. The company is widely represented throughout the United States and it also has agencies in foreign lands all around the world.

Magnesia for Heat Insulation.

"Let 85 Per Cent. Magnesia Defend Your Steam." That is the title of a new book issued by the Magnesite Association of America, which is announced as a study of the cause and prevention of heat losses in the transmission of steam for power or heating purposes, addressed to the architect, the engineer and the owner. It is also remarked that the question of heat wastage is one of increasing seriousness; that the rapid exhaustion of many of our coal and gas fields makes it daily more urgent. Every man who plans, operates or controls the use of steam for heating or power purposes, will find material for thought in the book. The appendix presents condensed information on the correct thickness and application of 85 per cent. magnesia coverings for every form of steam service.

Statement of the ownership, management, circulation, etc., required by the Act of Congress of August 24, 1912, of MANUFACTURERS RECORD, published weekly, at Baltimore, Md., for October 1, 1917.

State of Maryland,
City of Baltimore.
Before me, a Notary Public, in and for the State and city aforesaid, personally appeared Frank Gould, who, having been duly sworn according to law, deposes and says that he is the Vice-President of the MANUFACTURERS RECORD, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in Section 433, Postal Laws and Regulations, to wit:

1. That the names and addresses of the publisher, editor, managing editor and business managers are: Publisher, Manufacturers Record Publishing Co., Baltimore, Md.; editor, Richard H. Edmonds, Manufacturers Record, Baltimore, Md.; managing editor, one; business managers, Frank Gould and Victor H. Power, Manufacturers Record, Baltimore, Md.

2. That the owners are: Richard H. Edmonds, Manufacturers Record, Baltimore, Md., 539 shares; Mrs. Addie L. Edmonds, Manufacturers Record, Baltimore, Md., 30 shares; Miss Mary E. Edmonds, Manufacturers Record, Baltimore, Md., 80 shares; Frank Gould, Manufacturers Record, Baltimore, Md., 41 shares; I. S. Field, Manufacturers Record, Baltimore, Md., 60 shares; C. R. Marchant, Manufacturers Record, Baltimore, Md., 44 shares; V. H. Power, Manufacturers Record, Baltimore, Md., 12 shares; J. Robert Gould, Manufacturers Record, Baltimore, Md., 77 shares; William C. Sedden, Union Trust Building, Baltimore, Md., 6 shares; Mrs. Mattie W. Grasty, Staunton, Va., 150 shares; miscellaneous, 10 individuals owning each less than 1 per cent. of capital stock, 57 shares; total, 1200 shares.

3. That there are no outstanding bonds, mortgages or other liens against the property.

4. That the two paragraphs next above, giving the names of the owners, stockholders and security-holders, if any, contain not only the list of stockholders and security-holders as they appear upon the books of the company, but also, in cases where a stockholder or security-holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security-holders who do not appear upon the books of the company as trustees hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association or corporation has any interest, direct or indirect, in the said stock, bonds or other securities than as so stated by him.

FRANK GOULD,
Vice-President.

Sworn to and subscribed before me this 27th day of September, 1917.
JOHN W. HEWER.
(My commission expires May 4, 1918.)

PROPOSALS

BOND ISSUES

BUILDINGS

PAVING

GOOD ROADS

More Southern Proposal Advertising Is Printed In The Manufacturers Record Than In Any Other Paper

PROPOSAL ADVERTISING INFORMATION

RATE: 25 cents per line per insertion.

PUBLICATION DAY: Thursday.

FORMS CLOSE 9 A. M. Wednesday. Copy received later cannot be published until issue of following week.

NIGHT LETTER: When too late to send copy by mail to reach us by 9 A. M. Wednesday, forward by night letter.

THE DAILY BULLETIN OF THE MANUFACTURERS RECORD:

Published every business day; gives information about the industrial, commercial and financial activities of the South and Southwest.

The Daily Bulletin can be used to advantage when copy cannot reach us in time for publication in the Manufacturers Record before bids are to be opened, or when daily publications are necessary to meet legal requirements.

The same rate applies—25 cents per line per insertion.

Bids close October 27, 1917.

PROPOSALS FOR SHEET COPPER, ELECTRIC Wire and Cable, Electric Motor, Motor Generators, Automatic Starting Compensator, Electric Fixtures and Fittings, Storage Batteries, Fire Pump, Anchors, Chains, Saws, Ice Cutters, Glass Holders, Drinking Glasses, Aluminum Pans, Silverware, Matting, Napkins, Paper, Fire Brick, Drapery, Lumber and Ferromanganese, Sal Soda, Graphite, Carbon Disulphide, Calcium Chloride, Pitch, Coal Tar, Cable Grease, Creosote Oil, Japan Oil, Turpentine, Paint Remover, Litharge, Liquid Filler, White Lead, Japan Primer, Enamel, Shellac, Varnish, Paints, Lumber and Cressed Ties. Sealed proposals will be received at the office of the General Purchasing Officer, The Panama Canal, Washington, D. C., until 10:30 A. M. October 27, 1917, at which time they will be opened in public, for furnishing the above-mentioned articles. Blanks and information relating to this Circular (No. 1174) may be obtained from this office or the offices of the Assistant Purchasing Agents, 24 State Street, New York City; Audubon Building, New Orleans, La.; and Fort Mason, San Francisco, Cal.; also from the United States Engineer offices in the principal cities throughout the United States. **BENEDICT CROWELL, Major, E. O. R. C., U. S. Army, General Purchasing Officer.**

Bids close November 14, 1917.

TREASURY DEPARTMENT, Supervising Architect's Office, Washington, D. C., October 1, 1917. Sealed proposals will be opened in this office at 3 P. M. November 14, 1917, for the remodeling, etc., of the United States courthouse at Austin, Texas. Drawings and specifications may be obtained after October 15, 1917, from the custodian at Austin, Texas, or at this office, in the discretion of the Supervising Architect, **JAS. A. WETMORE, Acting Supervising Architect.**

Bids close November 9, 1917.

TREASURY DEPARTMENT, Supervising Architect's Office, Washington, D. C., October 1, 1917. Sealed proposals will be opened in this office at 3 P. M. November 9, 1917, for the construction complete of the United States postoffice at Forsyth, Ga. Drawings and specifications may be obtained from the custodian of site at Forsyth, Ga., or at this office, in the discretion of the Supervising Architect, **JAS. A. WETMORE, Acting Supervising Architect.**

Bids close October 24, 1917.

\$140,000 Road and Bridge Bonds

The Board of County Commissioners of Dade County, Florida, will, on or before 10 o'clock A. M. on the 24th day of October, A. D. 1917, receive at its office at the Court House in Miami, Florida, bids for the purchase of \$140,000 of special road and bridge bonds of Special Road and Bridge District No. 3 of Dade County, Florida.

The bidder shall state when he will comply with his bid, and each bid shall be accompanied with certified check on a responsible banking house or trust company, payable to the Chairman of the Board of County Commissioners of Dade County, Florida, in a sum equal to 2 per cent. of the amount of bid as an evidence of good faith and as security for the bidder complying with the bid, which certified check shall be forfeited to the county as liquidated damages in case the bidder fails to comply with his bid after being notified same has been accepted.

Certified check to be returned to unsuccessful bidder. The Board reserves the right to reject any and all bids if they deem it to be in the best interest of the county so to do.

For further particulars apply to the Clerk of the Board of County Commissioners of Dade County at Miami, Florida.

By order of the Board.
BEN SHEPARD,
Clerk of the Board of County Commissioners of Dade County, Florida.
By **W. E. NORTON, D. C.**

Bids close November 1, 1917.

\$30,000 Street Improvement Bonds

Sealed proposals will be received by the Commissioners of the Town of Hamlet, North Carolina, until Thursday, November 1, 1917, at 3:30 P. M., for \$30,000 Street Improvement bonds of the said town. Bonds to bear interest at 5% or 6 per cent. The bidder making a bid on both 5% and 6 per cent. bonds. The said bonds to be coupon bonds, payable ten years from January 1, 1918, which date they will bear. Bonds to be of any denomination suitable to the purchaser and payable at any bank desired by purchaser. Purchaser to furnish bonds ready for signature of officers of town.

Certified check for \$500 to accompany all bids, payable to G. B. Lewis, City Treasurer. For information apply to M. W. Nash, City Attorney, Hamlet, N. C.

This October 2, 1917.
J. C. LEIGH, Mayor.
G. B. LEWIS, City Clerk.

Bids close November 6, 1917.

\$80,000 Road and Bridge Bonds

The undersigned Board of County Commissioners of St. Lucie County, Florida, hereby gives notice that on or before the 6th day of November, A. D. 1917, and up to 2 o'clock P. M. on that day, they will receive bids for the purchase of Bonds of Special Road and Bridge District No. 1 in St. Lucie County, Florida, voted upon and authorized at a special election held in said county on the 19th day of June, A. D. 1917, and validated by the decree of the Circuit Court of St. Lucie County, Florida, on the 10th day of September, A. D. 1917, said bonds aggregating the principal sum of \$80,000, to become due and payable as follows, viz.:

	Principal.
July 1st, 1922.....	\$2,000.00
July 1st, 1923.....	2,000.00
July 1st, 1924.....	2,000.00
July 1st, 1925.....	2,000.00
July 1st, 1926.....	2,000.00
July 1st, 1927.....	2,000.00
July 1st, 1928.....	2,000.00
July 1st, 1929.....	2,000.00
July 1st, 1930.....	2,000.00
July 1st, 1931.....	2,000.00
July 1st, 1932.....	2,000.00
July 1st, 1933.....	3,000.00
July 1st, 1934.....	3,000.00
July 1st, 1935.....	3,000.00
July 1st, 1936.....	3,000.00
July 1st, 1937.....	3,000.00
July 1st, 1938.....	5,000.00
July 1st, 1939.....	5,000.00
July 1st, 1940.....	6,000.00
July 1st, 1941.....	6,000.00
July 1st, 1942.....	7,000.00
July 1st, 1943.....	7,000.00
July 1st, 1944.....	7,000.00

Said bonds to bear interest at the rate of 6 per cent. per annum, due and payable semi-annually, principal and interest payable at a banking house in said County of St. Lucie or at a banking house in New York City, N. Y., at the option of the holder.

Any and all bids may be rejected if the said Board of County Commissioners shall deem it for the interest of the county so to do. At 2 o'clock P. M. on said 6th day of November the said bids will be opened and the said bonds will be sold subject to the proviso above set forth. Each bid shall be accompanied by a certified check for \$1000.

All bids should be sent to P. C. Eldred, Clerk of the Circuit Court, Fort Pierce, Florida.
BOARD OF COUNTY COMMISSIONERS OF ST. LUCIE COUNTY, FLORIDA.

Bids close October 30, 1917.

\$175,000 5% Bonds

The Board of Commissioners of the Lake Long Drainage District, Irberville Parish, La., offers for sale and will receive bids at the office of said Board, at the Courthouse, at Plaquemine, La., up to 11 A. M. Tuesday, October 30, 1917, for the sale of:

A—\$50 bonds of \$100 each of the LAKE LONG DRAINAGE DISTRICT, bearing date September 1, 1917, with 5 per cent interest per annum from date, payable semi-annually on March 1st and September 1st of each year, maturing as follows: 15 bonds each year, September 1, 1918, 1919 and 1920; 17 each year, September 1, 1921, 1922 and 1923; 20 each year, 1924, 1925, 1926 and 1927; 21, 1928; 22 each year, 1929, 1930 and 1931; 23, 1932; 28 each year, 1933 and 1934; 29, 1935; 30, 1936; 31, 1937; 32, 1938; 33, 1939; 34, 1940 and 1941, and 35, 1942, predicated on an ad valorem tax.

B—\$115,000 bonds of the Lake Long Drainage District running through a period of 25 years, payable at such times as the Board of Commissioners may determine, bearing interest at the rate of 5 per cent. per annum, payable semi-annually, predicated on a tax of 25 cents per acre, commencing with 1917.

Bids may be made for either or for both lots of said bonds, and all bids will be opened in public at the hour mentioned.

The Board reserves the right to reject any and all bids.
Plaquemine, La., Sept. 27, 1917.
EDWARD J. GAY, President.
JOSEPH A. GRACE, Secy. and Treas.

Bids close November 12, 1917.

\$50,000 5% Road Bonds

Sealed bids will be received by the President of the Police Jury of the Parish of East Baton Rouge, Louisiana, the governing authority of Road District No. 2 of said Parish and State, up to the 13th day of November, 1917, at 12 o'clock noon of said day, for \$50,000 five (5) per cent. 27-year Good Roads Bonds, Series "D," of said Road District No. 2, embracing the entire Third Ward of said parish, issued by said Road District for the completion and maintenance of the Cross Roads in said District by unanimous vote of the property taxpayers of said District, voting at a special election held in said District on the 4th day of September, 1917, under the provisions of the Constitution and Laws of Louisiana.

Issued solely for the completion and maintenance of the Cross Roads in said Road District No. 2, as shown by maps and plans submitted by the Engineers of said District. The bonds will be dated October 1, 1917, of the denomination of \$1000 each, bearing interest at the rate of 5 per cent. per annum from said date. The first two (2) of said bonds payable April 1, 1919, and two of said bonds, in their regular numerical order, payable each and every year thereafter, April 1, until all of said bonds and interest coupons shall have been fully paid. Interest payable semi-annually on the 1st days of April and October.

Principal and interest payable at the office of the Treasurer of said Road District in the City of Baton Rouge, or at the Louisiana National Bank of Baton Rouge in the City of Baton Rouge, Louisiana, at the option of the holder.

The Police Jury of the Parish is required by law to levy tax in a rate sufficient to pay said bonds and interest annually upon the taxable property of said District.

Purchaser or purchasers of bonds may designate depository of funds, provided it meets with the approval of the Police Jury, the governing authority of said Road District No. 2, and ample security is given for their safekeeping.

Certified check for \$2500 required with each bid as evidence of good faith.

All investigations as to legality must be made before date of sale, and necessary data will be furnished for that purpose.

For further information address Jos. Gebelin, President Police Jury, Baton Rouge, Louisiana, or F. A. Woods, Secretary, Baton Rouge, Louisiana.

Bids close October 12, 1917.

Road Bonds For Sale

Newport, Ark., October 2, 1917.

Notice is hereby given that the Board of Commissioners of Road Improvement District No. 2, Jackson County, Arkansas, will offer for sale \$250,000 to \$350,000 road bonds, maturing 5-30 or 5-25 years, in the office of the Attorney of the Board, Newport, Arkansas, at 2 P. M. Friday, October 12, 1917. The right to reject any and all bids is reserved.

By order of the Board.
W. N. NANCE,
Secretary.

Bids close November 7, 1917.

\$12,500 Serial Bonds

Sealed proposals will be received by the Board of Education of Richmond County, North Carolina, until 12 o'clock M. on November 7, 1917, at Rockingham, N. C., for the purchase of \$12,500 serial bonds, to bear interest not to exceed 6 per cent. per annum, of School District No. 4 in Mineral Springs Township, Richmond County, North Carolina. Certified check in sum of \$250 must accompany each bid as evidence of good faith. The right to reject any or all bids is expressly reserved by said Board.

This the 2d day of October, 1917.
L. J. BELL,
County Superintendent of Schools.

Bids close October 25, 1917.

Steel Bridge

Sealed bids will be received up to 1 P. M. October 25, 1917, for a steel bridge across Little Tennessee River at the Indian Rock, near Methohe, Tenn. Each and every bid must be accompanied by a certified check of 10 per cent. of the bid for good faith. The right is reserved to reject any and all bids. Bids will be opened at 1 P. M. at Vonnore, Tenn., on October 25, 1917, by the Directors of the Fort Loudon Bridge Co. For any further information write J. C. Anderson, Vonnore, Tenn.

J. C. ANDERSON,
President.

Bids close November 7, 1917.

Steel Bridge

Sealed bids will be received until November 6, and opened November 7, for the construction of a Steel Bridge and Concrete approaches for the Dallas Southwestern Traction Company's bridge over the Trinity River at Dallas, Texas. Plans and specifications can be obtained by depositing a certified check of \$25 for the return of same. Each bid must be accompanied with a certified check for \$500, and the Company reserves the right to reject any and all bids.

CREEK CONSTRUCTION COMPANY,
Care F. H. Perkins,
333 Gaston Building,
Dallas, Texas.

Bids close October 22, 1917.

Road Construction

Sealed proposals will be received by the Commissioners of Monroe County Road Improvement District at Brinkley, Arkansas, until 11 A. M. Monday, October 22, 1917, for furnishing material and constructing approximately 22.2 miles of improved road within said district.

Approximate quantities:
88,000 cubic yards grading.
34,500 cubic yards gravel.
7,000 cubic yards concrete road.
111,000 square yards bituminous carpet.
1,800 cubic yards reinforced concrete in bridges.
950 cubic yards plain concrete in bridges.
1,000 linear feet pipe culverts.

Each proposal must be accompanied by a certified check, or a bidder's bond executed by some surety company authorized to do business in Arkansas, for \$5000 if for the entire contract, or for not less than 2 per cent. of the amount of the bid if for less than the entire contract.

Bond will be required from the successful bidder in sum equal to approximately 40 per cent. of the amount of the contract.

Plans and specifications are on file with Elmo Chaney, Secretary of the Board, Brinkley, Ark.; the County Clerk, Clarendon, Ark.; the State Highway Commission, Little Rock, Ark.; Parkes Engineering Co., Pine Bluff, Ark.

Prospective bidders may examine them at any of these places, or may obtain a copy for their own use from the engineers upon payment of \$10, one-half of which amount will be refunded to those who submit a bona fide bid. For any other information apply to the engineers for the district, Parkes Engineering Co., Citizens' Bank Building, Pine Bluff, Ark.

The right is reserved to reject any or all bids.

J. C. DOYLE,
ELMO CHANEY,
R. J. TORRY,
Commissioners Monroe County Road Improvement District.

Bids close October 16, 1917.

State Highway Bridge

STATE OF MARYLAND,
STATE ROADS COMMISSION,
NOTICE TO CONTRACTORS.

Sealed proposals for the following:
CONTRACT No. Ce-24—CECIL COUNTY.—Reconstructing one slab bridge on State Road near Bacon Hill in Cecil County, Maryland, consisting of two spans 13 feet 6 inches in the clear.

Will be received by the State Roads Commission at its offices, 601 Garrett Building, Baltimore, Maryland, until 12 M. on the 16th day of October, 1917, at which time and place they will be publicly opened and read.

Bids must be made upon the blank form contained in the book of specifications. Specifications and plans will be furnished by the Commission upon application and cash payment of \$1, as hereafter no charges will be permitted.

No bids will be received unless accompanied by a certified check for the sum of Five Hundred (\$500) Dollars, payable to the State Roads Commission.

The successful bidder will be required to give bond and comply with the Acts of the General Assembly of Maryland respecting contracts.

The Commission reserves the right to reject any and all bids.

By order of the State Roads Commission this 5th day of October, 1917.

FRANK H. ZOUCK,
Chairman.
CLYDE H. WILSON,
Secretary.

PROPOSALS

SEWERS WATER WORKS ELECTRIC LIGHT PLANTS BRIDGES

More Southern Proposal Advertising Is Printed In The Manufacturers Record Than In Any Other Paper

(CONTINUED FROM PRECEDING PAGE.)

Bids close October 16, 1917.

Paving and Sewer Construction

Sealed proposals will be received at the office of the undersigned in the City of Johnson City, Tennessee, until 7.30 P. M. October 16, 1917, for constructing bridges, sewers, storm-water drains, concrete curb and gutters, and paving with asphalt concrete, granitoid, bitulithic asphaltic concrete or tarvia, for improving Improvement Districts Nos. 24, 32, 33 and 34 according to plans and specifications in the office of the City Engineer.

APPROXIMATE QUANTITIES.

For Improvement District No. 24.
11,440 square yards paving.
8,580 lin. ft. curb and gutter.
4,290 lin. ft. 8" sewer.
4,340 lin. ft. 6" sewer.

8 catch-basins.
For Improvement District No. 32.

7,473.3 square yards paving.
5,880 lin. ft. curb and gutter.
2,840 lin. ft. 8" sewer.
2,840 lin. ft. 6" sewer.

4 manholes.
2 catch-basins.

1,200 lin. ft. storm sewer.

For Improvement District No. 33.

3,540 square yards paving.

2,896 lin. ft. curb and gutter.

1,448 lin. ft. 8" sewer.
1,169 lin. ft. 6" sewer.

3 manholes.
4 catch-basins.

32 storm sewer (size 12").

For Improvement District No. 34.

Estimated cost of grading, \$7500.

3,000 square yards paving.

2,682 lin. ft. curb and gutter.

1,346 lin. ft. 8" sewer.

1,080 lin. ft. 6" sewer.

4 manholes.
4 catch-basins.

30 lin. ft. 12" storm sewer.

Each bid must be accompanied by a certified check for an amount equal to ten (10) per cent. of the bid as a guarantee of the good faith of the bidder.

Bids are asked for payable in either cash or 6 per cent. bonds at the option of the city.

The right to reject any and all bids, or any part of any bid, is hereby reserved to the city. Bids will be opened at a regular meeting of the Board of Mayor and Aldermen of the City of Johnson City, Tennessee, Tuesday, the 16th day of October, A. D. 1917, at 7.30 P. M.

W. O. DYER,
City Engineer.

R. C. WARREN,
Recorder.

Bids close October 16, 1917.

Hard Surface Roads

Sealed bids will be received by the Board of County Commissioners of Hillsborough County, Florida, at their office in the City of Tampa, on October 16, 1917, at 11 o'clock A. M., for the construction of approximately fifty-four (54) miles of hard-surface roads, said roads being as follows:

For completion of the present brick roads to the county line to the following counties: Pasco on the north, Polk on the east, Manatee on the south, and Pinellas on the west.

Plans and specifications can be secured at the office of the Board of County Commissioners Hillsborough County, Florida, at Tampa, Florida.

JAMES G. YEATS,
Chairman Board of County Commissioners Hillsborough County.

Attest:
W. P. CULBREATH,
Clerk.

By JNO. J. HAUPT, D. C.

Bids close October 23, 1917.

Drainage Improvements

The Board of Drainage Commissioners of Beaverdam Drainage District No. 1 in Clarke, Madison and Oglethorpe Counties will receive sealed proposals up to 10 o'clock A. M. October 23, 1917, at the Court House, Athens, Ga., for thirteen miles of dredge ditches, containing about 350,000 cu. yds., and 12 acres of right of way.

Contract will be let in two sections, one for yardage and one for clearing right of way.

Plans, specifications and full information may be had at the office of the Board in Athens, Ga., or at the office of the Engineer, C. M. Strahan, Athens, Ga.

H. H. HAMPTON, Chairman.
W. A. BURNS, Secretary.

Bids close October 23, 1917.

Drainage Improvements

The Board of Drainage Commissioners of Shoal Creek Drainage District No. 2, Clarke County, Ga., will receive sealed proposals up to 4 o'clock P. M. October 23, 1917, at the Court House, Athens, Ga., for six and one-half miles dredge ditching, containing about 107,000 cu. yds., and for removing and rebuilding three highway bridges.

Plans, specifications and full information may be had at the office of the Board in Athens, Ga., or at the office of the Engineer, W. D. Alexander, at Charlotte, N. C.

R. E. JOHNSON, Chairman.

CLAUDE TUCK, Secretary.

Classified Opportunities

MINERAL AND TIMBER LANDS WATER POWERS MISCELLANEOUS PROPERTIES

W. WALKER WARE, TOANO, VA.

Headquarters for first-class real estate, truck farms, timbered land, clubhouses and hunting preserves, situated in Tidewater Virginia; 37 miles from Richmond; 37 miles from Newport News. Write for what you want.

OHIO COAL, IRON AND TIMBER TRACT. 13,000 acres Southern Ohio; 5 miles frontage on R. R.; 3 seam coal above drainage; 12 million tons iron ore; million tons high-grade limestone; over million R. R. ties can be sold, which will pay for tract. Would make fine stock ranch. Price \$25 per acre in fee. Title perfect; immediate possession. Ed. E. Walker & Co., No. 519 Madison Avenue, Covington, Ky.

FOR SALE? Farm, timber land, mineral property or any other? We can help you get in touch with possible purchasers by an advertisement in these columns. For rates see head of this department.

5000 ACRES, underlaid with coal. Fine agricultural land and good hunting; 15 miles from Richmond, Va. Twenty dollars per acre. R. B. Chaffin & Co., Inc., Richmond, Va.

KAOLIN

FOR SALE or will consider capital to work it. 250 acres kaolin, one mile from railroad; 50 acres of this 12 feet thick, uncovered. P. O. Box 22, Estill, S. C.

ASBESTOS

GROUND ASBESTOS FOR SALE. Samples on request. Asbestos Mining and Mfg. Co., Stony Point, N. C.

MANGANESE ORE LANDS

700 ACRES MANGANESE ORE LANDS for sale; engineer's estimate, 800,000 tons; railroad one mile; now mining with pick and shovel; analysis and records available. Address Doak Aydelott, Tullahoma, Tenn.

FULLER'S EARTH

DEPOSIT FULLER'S EARTH on water transportation. Address H. B. Wordehoff, Plant City, Fla.

IRON ORE LANDS

1000 ACRES brown hematite iron ore, located in New York State, on main line trunk railroad. Samples show an average assay of 44% metallic iron; 8500 tons per acre a conservative estimate. Horwood, 804 S. W. Life Bldg., Dallas, Tex.

COAL MINES

COAL LEASE—1500 acres, C. & O. Ry.; now operating, output 500 to 600 tons daily; splendid equipment; bear closest investigation; rare opportunity; owner retiring. Box 164, Alderson, W. Va.

FOR SALE—Coal mine on Norfolk & Western Ry. now producing 200 tons daily; equipment to double output, 250 acres of coal (\$36 royalty). If interested, write Coal, Box 600, Williamson, W. Va.

RATES AND CONDITIONS

Rate 25 cents per line per insertion. Minimum space accepted, four lines. In estimating the cost, allow seven words of ordinary length to a line. When the advertisement contains a number of long words, proper allowance should be made. Terms: Invariably cash with order; check, postoffice or express order or stamps accepted. No display type used. Questionable or undesirable advertisements will not be accepted. The assistance of our readers in excluding undesirable advertisements is requested. We reserve the right to refuse any advertisement. No patent medicine, whiskey or mining stock advertisements accepted. Rate for special contracts covering space used as desired within one year as follows: 100 lines, 23c. per line; 300 lines, 21c. per line; 500 lines or more, 20c. per line.

COAL LANDS

VALUABLE COAL LANDS FOR SALE

We offer for sale for a customer, one tract of 20,000 acres of valuable Kentucky coal property at \$25 per acre. Furnish references when answering this. Wire or write—Southern Machinery Exchange, Somerset, Ky.

TIMBER FACTORS AND ESTIMATORS

TIMBER FACTORS AND ESTIMATORS.
C. A. SANBORN,
Successor to
SANBORN & GEARHART.

International Timber Lands Investigation a Specialty.
American Natl. Bank Bldg., Asheville, N. C.

TIMBER LAND

VIRGIN LONG-LEAF YELLOW PINE TIMBER LANDS, LOCATED IN FLORIDA.

For sale, direct from the owners, who purchased years ago, and who have placed on the market at prices to move promptly: 12,730 acres, in solid body, three miles' frontage on railroad; fee-simple. Price \$9 per acre.

13,680 acres, three miles' frontage on railroad; all timber privileges. Price \$7 per acre. 22,000 acres, solid body, several miles' frontage on railroad, no timber being farther from railroad than 6 miles; fee-simple. Price \$11 per acre.

100,000 acres, solid body, traversed by railroad; none of the timber over 6 miles from railroad; fee-simple. Price \$9.50 per acre, or timber lease \$7.50 per acre.

Lands valuable for grazing, also for horticultural and agricultural purposes after timber is removed.

Suitable for turpentine, crosstie and sawmill purposes.

Titles to all above properties perfect. If you are interested as a buyer or a direct representative of a buyer, write for full particulars. Albert Fendig & Co., Brunswick, Ga., and Jacksonville, Fla.

OAK AND GUM HARDWOODS. L. L. virgin pine timber in large and small tracts, cut-over pine lands. D. R. Peteet, 221 City Bank Bldg., Mobile, Ala.

FOR SALE—2000 acres timber land in rich delta country; complete drainage system almost completed; near public road; \$25 per acre; terms if desired. I. N. Moore, Dumas, Ark.

TIMBER LAND

FOR SALE—7000 acres timber land in Green county, Miss., from 1 to 4 miles from railroad; timber rights reserved on 2500 acres; land is well watered and especially suitable for stock raising; near large oil development; \$7.50 per acre; 1/2 cash, balance 1, 2 and 3 years. Address J. B. Curlee, Box 544, Mobile, Ala.

FOR SALE—About 10,000 acres timber land in Louisiana, mostly oak, with some cypress, hickory and other hardwoods. Leonard Matthews, 5447 Cabanne Ave., St. Louis, Mo.

640 ACRES of good timber. Gold exists and has been taken from the property in paying quantities in a primitive way. Timber of fine quality and estimated at three to four million feet. \$25,000. R. B. Chaffin & Co., Inc., Richmond, Va.

FOR SALE—Several tracts virgin pine timbered lands. Petteway Investment Co., Tampa, Fla.

FOR SALE—Ten thousand acres timber land. J. C. Cole, Canton, N. C.

FLORIDA PINE LANDS—11,000 acres virgin pine, Orange County. Estimated cut 20,000,000. Timber worth price asked, fee-simple. Good turpentine location. Fine fruit, trucking and grazing lands. J. W. Pope, Jacksonville, Fla.

TIMBER

40 MILLION FEET of the highest grade stumpage in the South (75% red gum, balance cypress, oak, pine, poplar and hickory), located on a navigable river in South Carolina, within 2 1/2 miles of Atlantic Coast Line Railway and but 6 miles therefrom at farthest point. An extra good logging proposition, with 14 years for removal of timber. Only principals need apply. Address No. 4041, care Manufacturers Record, Balto., Md.

FOR SALE—Old N. C. timber. About 20 million feet of finest grade N. C. pine. Water and rail transportation. Address No. 4077, care Manufacturers Record, Balto., Md.

WANTED—To sell two hundred million feet timber on stump, well located. Hardwoods, pine, cypress, etc.; good propositions. J. Arthur Henderson, Charlotte, N. C.

TIMBER

FIFTY SECTIONS TIMBER FOR SALE. 758,000,000 feet spruce, fir and pine, suitable for pulpwood or lumber. For maps, price and other particulars address E. V. Tillson, Tillsonburg, Ontario, Canada.

SPRUCE TIMBER—30,000,000 feet spruce timber, two miles from railroad; 15 years time to cut; good terms. Can show a short notice \$5 per 1000 feet. J. H. Maddox, 314 Candler Bldg., Atlanta, Ga.

FOR SALE—Large body of extra fine virgin yellow pine timber, situated in Alabama, within easy reach of R. R. Address P. O. Box 1610, Pensacola, Fla.

FOR SALE—Dogwood timber. About 400 cords of merchantable dogwood timber, located nearby South. Water and rail transportation; cheap labor. Address No. 4077, care Manufacturers Record, Balto., Md.

15,000,000 FEET VIRGIN TIMBER in Caroline County, Va. As fine as grows. Will cut anything. Two-thirds hardwood, mostly white oak, hickory and poplar, balance yellow pine. Good level logging land. Price \$80,000.

50,000,000 feet short-leaf pine, Eastern North Carolina. Price \$300,000.

Up-to-date band mill in Eastern North Carolina; 60,000,000 feet standing timber behind it. Making good money. Price and terms on application. Green & Redd, Nimb and Franklin Sts., Richmond, Va.

LUMBER

FOR SALE—2" and 3" red and white oak crossing plank, 12 to 16 ft. long. Forest Hardwood Co., Forest, Miss.

FOR SALE—White oak wagon poles, 3"x4" at butt, 3"x3" at point, 12-ft. lengths. F. F. Bown Mfg. House, P. O. Box 500, Pittsburgh, Pa.

WAGON POLES

FARM AND TIMBER LANDS

PRACTICALLY 85,000 acres round timber, estimated to cut 250,000,000 feet pine and 40,000,000 feet cypress, with nearly six miles of good water frontage. I am in a position to quote a price in fee or less than the value of the timber on a stumpage basis, and the land cut over would make excellent colonization proposition.

I have other smaller tracts of timber, cypress and prairie lands, and will be glad to furnish complete description, prices and terms on request.

William I. Phillips, Miami, Florida.
Reference: Bank of Bay Biscayne, Miami, and Miami Chamber of Commerce, Miami, Fla.

FOR SALE—Superb stock and grain farm, 758 acres; 6 miles south of Augusta; divided into 17 fields; 10 miles wire fence; half cleared, balance in valuable timber, several million feet; railroad now building through place, affording market for the timber; 600 acres level river bottom land; levee now near completion, will keep water off; native grasses for pasture, can feed 300 mule colts, these increase in value \$5 yearly. Owner been on place seven years improving it. Ample buildings, including mercantile business. No other stock and grain farm like this. See it and me. Emory Cason, Augusta, Ga.

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